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ABSTRACT

Twenty-five papers presented at the conference include papers on the role of the site coordinator in a distributed education network in Ontario; student support systems in the Open University of Israel; the dilemmas of designing a computer mediated communication support system; interactive libraries; tutoring in technical science in the Open University of the Netherlands; research supervision at a distance; the role of tutoring and group support in distance education; the relationship between interaction and independence; distance education in India; applications of telecommunications for interactive tutoring; and cost effectiveness analysis of projects that increase student interaction in distance education. Most of the papers include references. The individual papers are briefly reviewed in the introduction, and continuity from papers presented at two earlier conferences is discussed. (GL)

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INTERACTION AND INDEPENDENCE;

STUDENT SUPPORT IN DISTANCE EDUCATION AND OPEN LEARNING

CONFERENCE PAPERS
Edited by Alan Tait

An international conference presented by
the International Council for Distance Education
and the British Open University Regional Academic Services

September 19th to 22nd, 1989
at Downing College, Cambridge, England

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INTRODUCTION

Alan Tait

It is a pleasure to write the introduction to another collection of papers, the third, for an international conference on distance education and open learning in Cambridge. The first 2 meetings in 1984 and 1987 took the forms of workshops on counselling in distance education, dedicated to a particular sphere of activity within the field of student services which had not hitherto found a focus or a forum. That achieved, our third has taken a broad theme, 'Interaction and Independence in Distance Education and Open Learning', the title drawn from a seminal article some ten years ago by John Daniel and Clement Marquis in the predecessor to the journal Open Learning, Teaching at a Distance (1). To this latest conference have been attracted a wider range of colleagues: course writers and producers, administrators, researchers, specialists in audio-visual, telephonic, and computer-mediated communications fields, as well as those broadly speaking in the field of student support, tuition and counselling.

There is therefore a continuity from the article by Daniel and Marquis(2), the collections of papers from the earlier two meetings, and this one, in that student leaerning lies at the heart of our concerns. We like to think that the series of conferences have made a contribution to distance and open learning practice and theory in the international community, in the sense that the relationship between the needs of the individual student and the elements that support his or her learning are more and more, we hope irrevocably, acknowledged as essential and integral concerns. If these conferences have contributed to the decline, even demise, of the behavourist model of the faceless student to be processed through the course package, driven by technocratic, economic or anti-democratic imperatives, then they have been worthwhile.

The themes of the article by Daniel and Marquis (3) remain pertininent, indeed pressing. They include

i) how interaction is to be defined, the term being seen by the authors as involving two-way contact between a student and another person in such a way as to elicit from him (sic) reactions and responses which are specific to his own requests and contributions, including such activities as tutoring and counselling. The authors note that they are offering a more restricted view than that which states that all learning must involve interaction.

ii) how independence is to be defined, this term being used broadly "to denote those learning activities where there is no interaction as we have defined it." Examples cited include study of written material, watching/listening to broadcasts, and writing essays and assignments.

iii) the political implications of potentially authoritarian and centralised course materials.

iv) the general financial pressures which open and distance learning are intended to find solutions for through its economies of scale, and which are seen as militating against interaction as defined above.

v) the extent to which student availability is constrained, when his or her time is being competed for by family and work as well as study, and the implications this has for interaction and independence.

vi) the question of pacing within a course, and the extent to which the benefits in terms of student success and throughput have to balance with student freedom and autonomy.

vii) counselling, which the authors divide (using Nicholson's distinctions) into the stages of induction crisis, differential transit and settled connection, and go on to argue that institutions teaching without such support " may be living in a fool's paradise."

viii) tutoring, animating and facilitationg, which the authors relate to support for a particular course, by correspondence and in one-to-one relationships.

ix) group meetings, where the authors warn "that bringing people together does not automatically create a useful educational experience," and report on the individual, pair, and group work structure developed by Northedge. They also look to telecommunications, in particular the use of the telephone, for lower cost group interaction.

Amongst their conclusions the authors write "Although some remote-learning systems operate without any personal contact we hope to have shown that the inclusion of properly planned interaction can be a help to the student. As well as socialising his learning, it can provide an element of pacing and round off the authoritarian edges of the courses."

While considerable attention has been given to these issues over the last decade, the areas of theory and practice which we can identify as having significantly moved on are disappointing in scope, as the recent article by Anne Gaskell and Roger Mills (the latter co-organiser of this conference) points out (4). However, in this collection of papers there is evidence that the use of concepts has become at least more sophisticated, and that interaction of one sort or another has become acknowledged as an integral element. I have contributed elsewhere on the political dimensions at the macro level (5)(6).

For the convenience of readers, I now go on to group the papers in order to provide some routes through the book.

The concepts of interaction and independence are addressed by a number of contributors. First to be mentioned is Michael Moore, whose paper (which accompanies his keynote address) is entitled "The theory of distance education: some recent literature." Moore's line of enquiry in the 1970's has been amongst the most influential in the field. He argues that the concepts of dialogue, structure and autonomy are three key and established concepts which need now to be investigated by research. John Daniel himself reflects on the changes over the last decade, and indicates that he regards the earlier definition of interaction (two-way contact with another person) as too restrictive, with the advent of interactive technology. Daniel also notes the very considerable educational needs of developing countries, and suggests that greater independence is likely to be forced on many students as only the purer distance education systems will represent realistic ways forward. In a related way, David Sewart argues that those who approach distance education solely from an economic point of view will ignore the educational process of interaction, which is as important in our field as any in education. Hence the title of his paper is set in the interrogative: "Interaction costs money; independence is free?"

The paper by Bernadette Robinson and John Dodds represents the fruits of much experience in developing countries by two British consultants, the former from the Open University and the latter from the International Extension College. The economic and related structural problems in developing countries, especially in the field of communications (eg roads and post) make "achieving a synthesis between interaction and independence in developing countries ....more difficult but not impossible." It is also, in many cases, more important because of students limited educational backgrounds. The two authors endorse Daniel's concern for, amongst other things, the need to mediate "the authoritarian nature of the system."

Two colleagues write themselves from a developing country, namely India, which has of course a substantial industrial as well as rural base. Badri Koul from the Indira Gandhi National Open University (IGNOU) in a wide-ranging and fascinating paper sketches the geographical, social, linguistic, and economic complexity that make up his country. He takes the concepts of interaction and independence from a macro level, and describes, for example, the difficulties IGNOU has had in interacting with a university in the developed world (unspecified) with a proposal for cooperative use of course materials. He takes independence to be the embodiment of open learning, "the fourth major revolution in the evolutionary process of education." A.C.Phukan looks in particular at the situation in the north-eastern states of India, and the difficulties which distance education has to cope with. It is in one of the north-eastern states, namely Arunachal Pradesh, that is found the lowest literacy rate in India, less than 21%.

Greville Rumble, in examining the case of some critics that interaction in distance education is perforce very limited, and that such systems tend towards "conceptual closure", asks whether things are much better in general in higher education. He goes on to look at the contribution which computer-mediated communication makes, principally electronic mail and computer conferencing, which is already revolutionising student/tutor and student/student interaction. These approaches will provide "iterative discourse."

Discourse is the term which Philip Juler, of Deakin University, Australia, adopts in preference to the metaphors of conversation and dialogue for educational process. His use of the concept discourse "shifts attention away from preoccupation with the intrinsic qualities of 'texts' provided by an institution, and towards the kinds of interaction that may occur between and among teachers, students, and other people." The discourse model that he goes on to develop "suggests that any organised distance education process should be to some extent unstructured and unpredictable." Juler takes as an example "a typical residential conference...organised around a particular theme in distance education," and quite accurately asserts that in asking for papers around a theme the organisers have begun to suggest a text, but "no-one imagines that the text is definitive or that it should dominate the proceedings."

Another colleague from the same institution, Jenny Hughes, has undertaken ethnographic research amongst student support groups, and confirms that interaction is important to students not only for the specifically academic purposes but also for the cameraderie and 'university culture' which can be developed there. Further research reported on comes from Yael Enoch, of the Open University of Israel, which isolates previous educational achievement at the OUI as well as in other institutions, together with additional tutorial programmes, as factors in student success. Enoch argues that "purists" who feel that students should work on their own with their materials must admit "the social reality" where students accepted on an open access basis to higher education will benefit from further support. Her colleague at OUI, Margalit Ganor, also examines the extent to which students want support and she is able to conclude "the data gathered so far indicates unequivocally that more and more students who want to obtain an academic degree are drawn to study when offered the opportunity of doing so in organised groups." Anthony Prideaux of Plymouth Polytechnic describes proposed research into existing support systems of a number of kinds of work-based open and distance learning programmes. The research should provide very interesting comparative data which we may be able to evaluate at a future meeting.

In the field of tutorial support we have a paper from Sarah Guri-Rozenblit, of OU Israel, describing the support of schoolteachers with special programmes, many of which are located according to the slogan "every school a campus!" Cecile Crutzen of the Open University of the Netherlands writes in the context of information technology courses "In the printed material one can consider a wider spectrum of students, but it is impossible to anticipate every student's wish or background. Tutoring can be a flexible interface." She offers a definition of tutoring in informatics terms for distance education as "a soft interface between the 'hard ' course material and the individual student or group of students," and goes on to examine the balance of advantage and disadvantage in restricting students to a common start-time for a course in order to facilitate group tutorials.

Colleagues writing about more general forms of student support and counselling include Ruth Arav of OU Israel, H.K.Hui of Hong Kong Polytechnic, Mary Rae of the New Zealand Correspondence School, and Terry Anderson and Robert Sweet of Lakehead University and the Contact North system, of Ontario, Canada.

Arav's paper provides a broad review of the different support systems which exist or are being planned at OU Israel. She describes amongst a range of initiatives "OUI has decided that from 1990 all students who declare their aim is to get a BA degree will have to consult with an academic counsellor before they enrol for an OUI course." Hui describes support to students on a certificate course in fashion and clothing manufacture. He divides the support into 3 sections; within the self-learning materials, within the learning system, and in assignment marking. Amongst a range of contributory elements, he identifies the potential of telephone counselling, and argues for the importance of having a clear understanding of student characteristics when planning student support systems. Rae describes the secondary school teaching at a distance in New Zeaoland (aimed originally at students in remote locations), and the shift in emphasis towards learning at a distance which has been accompanied by an increase in student work output and positive changes in national examination pass rates. Anderson and Sweet describe a system also designed for students spread over large distances in northern Ontario, where 800,000 people are spread over 780,000 square kilometers. Contact North has established a number of delivery networks with a high profile in local communities, using for the most part print and audio- tape packages supplemented by audio and computer conferencing. Facsimile (fax) machines are being used for rapid turn-round of student assignments and tests. In both New Zealand and Ontario we find the contexts within which distance education was largely conceived, while in Hong Kong we find an example of its subsequent development in small but densely populated areas.

Two further papers in addition to Rumble's already mentioned testify to the dynamic of the new technology, in particular computer conferencing and electronic mail, for interaction and independence. David Birchall and Lesley Wilson of Henley Management College reflect on the balance between the two qualities when designing computer mediated communication (CMC) based support. Students on their MBA course are expected to be independent in the sense of being self-supporting, and the role of CMC should not detract from that. On the other hand "Rather than contact being confined to correspondence, remote tutors can 'talk' to tutees and give speedy response to help overcome problems."

To bring us sharply down to earth, Bernadette Robinson charts the decline in the use of telephone teaching in the British OU. She links the decline most directly to problems with technology and cost, which have been solved elsewhere.

A paper from the Ontario Institute for Studies in Education, Canada, from Liz Burge, Judith Snow, and Joan Howard, reports on research into library services and distance education, and in particular on what are termed two dimensions of interdependence in distance education: the learner and the available library services and the librarian and the distance educator. The authors go on to say "We believe that without paying careful attention to the development of these two dimensions, the third level of interdependence - the learner's interdependence with peers and tutors during the actual course - will not be reached." Also from Canada, but from Athabasca University in the western Province of Alberta, Virginia Nilsson reports on the 'Learning Assistance Program.' Based on the argument that students are consumers rather than objects for educational intervention, the scheme offers the opportunity but without compulsion (cf Arav) of a voluntary academic asseessment programme. Interaction in the form of diagnostic tests with accompanying individualised advice helps students to identify and remedy their academic weaknesses. Lewis Elton and Mike Wort report on work in the field of research supervision at a distance, based at the University of Surrey in south-east England. They conclude that "research training and supervision at a distance is possible; it need not be inferior to that provided face-to-face; and there are actual advantages to it."

The last two papers to be mentioned bring us back to the concept of independence. Tony Wright, from the British OU, argues that structured group learning can support the goal of independence (it arises out of interaction therefore), independence according to Wright being "to do with increasing the area over which one can exercise control of one's own destiny." Ross Paul from Athabasca University proposes that the development of independent learners should be the goal of all educators, and that while distance educators are working in a field particularly suited for such a goal, they do not necessarily design systems to achieve it. He argues (cf Hui) that student support systems would be more effective "if we could learn more about identifying individual learning styles and hence do a better job of matching service to individual need."

This collection of papers and the conference for which they have been prepared mark a further stage in the recognition that the issues of interaction and independence are central, not peripheral, to distance education and open learning. The creative energy that is liberated by groups over and above individual effort, for us as much as for our students, is represented here. We may need to consider however, as for any well-run self-help group, the need to agree on the definition of objectives, concepts and methodologies, in order to be able to anticipate over the next ten years the common purpose and achievement that is now both essential and realisable. This collection will, we hope, carry forward reflection and improvement in both theory and practice in our field.

Alan Tait
Cambridge, England.
July 1989.

1 Daniel, J and Marquis C, (1979), Interaction and Independence: getting the mixture right, Teaching at a Distance 14.

2 Daniel, J and Marquis C, (1979), ibid.

3 Daniel, J and Marquis C, (1979), ibid.

4 Gaskell, A and Mills R, (1989), Interaction and Independence: what's been said and what's been done? Open Learning, Vol.4, No.2.

5 Tait, A, (1988), Democracy and distance education: the role of tutorial and counselling services, Journal of Distance Education,

6 Tait, A, (1989), The politics of open learning, Adult Education,

The Evolving Role of the Site Coordinator in A Distributed Education Network: The Case of Ontario's Contact North/Contact Nord Delivery System

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The Evolving Role of the Site Coordinator in a Distributed Education Network: The Case of Ontario's Contact North/ Contact Nord Delivery System

Abstract:

Most distance education delivery systems are centralised operations. Course design, development and dissemination decisions are made independent of the learner's personal situation or conditions in the communities where they live and work. The potential for developing more responsive delivery networks in remote regions of Canada's North is examined in this paper with reference to a multi-user, distance education delivery network: Contact North/Contact Nord, established in 1987 by the Ontario Government. The paper briefly outlines the services of Contact North then examines the role, training and support services of the system's community site coordinators: part-time learner advocates and facilitators who support distance education students enroled in courses from a variety of educational deliverers.

The human, capital and operational resources required to provide distance education delivery services in a number of communities spread over large distance is often beyond the resources of any single education deliverer. As a response to these high costs, a number of delivery networks have been established in Canada (Alberta Teleconferencing Network, Contact North/Contact Nord, Open Learning Agency).

The functions and services of these delivery networks vary in scope, mandate and capacity. They generally provide the following:

1. Information services to enroled and prospective learners;

2. Learning centres for interactive distance delivery of courses;

3. Technical troubleshooting and instruction in use of delivery technologies;

4. Informal, first line student support and referral services.

Although at one time viewed simply as communication systems or carriers of programs designed and developed by other educational institutions, this neutral role for the networks is gradually evolving to one more directly involved in shaping the delivery of programs that meet specific learning requirements of local communities. The focal point for this role shift may be seen in the changing nature and level of student support offered at the community level. In the case of Contact North/Contact Nord, the community distance educator is the local learning center coordinator or 'site coordinator'.

Traditionally, student support functions have been housed within the educational institution (McGinnis-Rankin & Brindley, 1986). As a consequence, the services offered have not been effectively utilised by distance students. In contrast, the Contact North/ Contact Nord site coordinator is very visible, has frequent contact with learners and can identify the community learning context within which he or she must operate (Anderson & Nelson, 1989). The student support activities of the site coordinator, however, are undertaken within the operating principles and practices of both the CN/CN system and the educational institutions (e.g. colleges and universities). To date, these institutions have been guided by a delivery model best characterised as one which views education as a commodity to be dispensed. In Boot & Hodgsons' (1987) terms, this 'dissemination' model misconstrues the nature of learning and neglects the developmental needs of students. In contrast, an adequate 'developmental' model would recognise the personal situation of learners and support their efforts in 'creating and validating their own meanings' (Boot & Hodgson, 1986: 15). In order to take advantage of the opportunities made available through programs developed and delivered with a developmental orientation, students must become directly engaged in the delivery process itself. The current issue within CN/CN and other such distributed educational networks is the manner in which this involvement will be undertaken. How ever the process evolves, it is increasingly apparent that the site coordinator will be central to achieving a more responsive delivery system.

This paper first describes the objectives and delivery modes utilized for the delivery of distance education programming by Contact North/ Contact Nord. It then examines the job requirements of the site coordinators and the program of continuing professional education provided to support an evolving role as facilitator of the community education process.

Contact North/Contact Nord

Contact North is a project of the Ontario government, designed to increase access to formal and informal educational programming to the residents of Northern Ontario. The majority of Canadians live in the southern part of the country -- for the most part in large cities distributed along the border with the U.S. -- a significant number reside in relatively small, isolated communities in the North. Some sense of the geographic distances and population densities involved in the area served by Contact North/ Contact Nord Project may be gained from a simple comparison: In Northern Ontario, approximately 800,000 people are spread over an area of 780,000 sq. kilometres. This is less than 2% of the population of the United Kingdom, distributed over three times the land mass.

The four year, 20 million dollar pilot project is designed to achieve the following objectives:

1) To improve access to formal educational opportunities at the secondary and post-secondary level for residents of Northern Ontario.

2) To establish a long-term capacity to improve access to other training and informal educational opportunities.

3) To meet the ongoing and emerging educational needs of residents in communities remote from conventional delivery sources by use of new information and communication technologies.

4) To meet the special needs of francophone and native peoples in Northern Ontario.

5) To create new and expand existing expertise in the design and operation of technologically enhanced distance education programs in Northern Ontario.

6) To create models for the alternative delivery of educational services capable of:

   a) application more broadly throughout Ontario.
   b) application to the needs of other jurisdictions, including developing countries.

7) To create a "test-bed" to evaluate the effectiveness of various technologies in delivering distance education.

In order to accommodate the widest variety of delivery modes currently in use by distance education delivery institutions in Ontario, Contact North/Contact Nord has configured its network with a heterogeneous collection of educational delivery technologies. A 28 port digital teleconferencing bridge as well as the CoSy computer conferencing system was purchased for each of the two centrally located regional coordinating centres. Each of the over 40 access sites is equipped with a teleconferencing convener, a facsimile machine, a video tape playback system and television, an IBM AT and a Unisys ICON microcomputer as well as an audio cassette recorder and telephone answering system. Telewriter II audiographic devices have recently been installed to enhance the teleconferencing capacity on the network.

The major users of the Contact North/Contact Nord network have been northern colleges, universities and secondary schools delivering credit programming. The network is also used by non profit community organizations and professional groups for meetings and training activities.

In the various Northern communities, the Contact North/Contact Nord learning site comprises a small multi purpose classroom available as a study and information centre as well as reception point for programming. The access points are located in a variety of sites including College extension offices, public schools, community training centres and other available locations. Various community groups and local education institutions must then develop collaborative arrangements to share the Contact North/Contact Nord resources.

The most common mode of delivery currently being used on the Contact North/Contact Nord network is print and audio tape packages supplemented by audio and computer conferencing. The facsimile machines are being used for rapid turn around of student assignments and tests.

Site Coordinator: An Evolving Job Description

In each of its access communities Contact North/Contact Nord employs a part time site coordinator. Generally these local community contacts are female, have completed some post secondary education and are active in a variety of roles within their communities.

The role and skill of the local community site coordinator is of crucial importance to the Contact North/Contact Nord project. The site coordinator completes the cycle of cooperation by facilitating collaboration between institution and community learners. The site coordinator acts as an information resource, technician, librarian, counsellor, referral service and janitor. The site coordinator, as the key community contact must have well developed personal skills as well as credibility and knowledge of the local community in which they work.

The site coordinators work approx. 20 hours a week, sharing their work hours between starting and monitoring the delivery of audio conference courses and maintaining regular office hours. The evening office hours allow learners to work with the educational tools located at the access sites as well as meet with the site coordinator and other learners for group support, counselling and information.

The role of the site coordinator varies, depending on the educational needs and the demographics of the local community. The role is also flexible enough to allow the talents, skills and expertise of the individual site coordinator to be applied to the job. Generally, however, the services of the site coordinators fall into 5 major categories:

1. Technical Support:

The site coordinators provide training in the use of the various technical equipment. They offer personal training on operation and protocols for successful audio and audio-graphic supported teleconferencing. They also encourage student to make use of the tutorial software on the computers to learn word processing, keyboarding skills and DOS operations. Finally they instruct students on using communications tools such as the facsimile and computer conferencing system to contact instructors, institutional administrators and fellow students.

2. Information Services:

The site coordinators, maintain a library of distance education calendars and promotional materials. In addition they maintain reference books which list courses and programs available at a distance from institutions throughout North America. The sites also stock sample kits from major deliverers, especially secondary school distance education programming, which allow students to preview and in some cases actually commence their distance education studies without waiting for the completion of the formal registration procedures. The site coordinators are encouraged to read all calendars that are distributed with the goal that they become knowledgable referral agents - not professional academic or vocational counsellors. The site coordinators are also familiar with the various student services available from the delivery institutions and encourage students to take advantage of available assistance.

3. Promotion:

Site coordinators actively promote all types of distance learning. They are encouraged to address community groups such as the Chambers of Commerce, Home and School Associations and other groups. Besides promotion of distance education in general they also distribute pamphlets and other advertisements on behalf of institutions delivering specific programs within their community.

4. Advocacy and Referral:

Front line educational workers such as the site coordinators are confronted with a variety of student issues and problems ranging from lost text books to deep personal and community problems. The site coordinators are trained to be good listeners and to know the resources of their local communities and educational institutions that can be focused on these problems. Obviously they do not provide indepth student counselling nor can they speak for the institutions which use our delivery network, yet they can, and do provide the necessary encouragement and support to help students, help themselves.

5. Feedback to Delivery Institutions:

The site coordinators also serve as community contact points for delivery institutions. Besides assisting in promotion and referral they have an important role in focusing and defining the educational needs of their own communities and feeding that information back to delivery institutions.

The site coordinators are given a great deal of freedom to develop promotion and support services that meet the needs of their local communities. Some examples of innovative initiatives undertaken by the site coordinators are the coordination of a local "Friends of Distance Education" group, operation of a local computer bulletin board system promoting distance education, editing of an online student newsletter on the Contact North/Contact Nord Cosy Computer conferencing system and numerous promotional presentations to community organizations.

Site Coordinators: Training and Support:

The challenge of training and supporting single employees spread over a wide geographic area presents an opportunity for Contact North/Contact Nord to utilize its own distance education expertise and technology.

The site coordinators attend a 2 day training session when first hired at which time they are exposed to the administrative and technical operations of the organization as well as the concepts and programming associated with distance education delivery. After this initial training ongoing training and support is provided at a distance.

Audio teleconferencing is used for biweekly staff meetings which deal with administration, student support, troubleshooting, scheduling concerns and often include guest speakers from one of the delivery institutions.

An ongoing CoSy conference system maintains communications on a 24 hour a day basis. A variety of Cosy conferences are used to announce course changes, discuss developing issues, group problem solving and most important to provide mutual support and encouragement. The site coordinators' job can be a very lonely one but the synergistic collaboration and support of the group is of immense value to maintenance of positive employee moral and the development and sharing of innovative ideas (Sweet, Anderson & Halenda, 1989).

The computer conferencing system is also extremely useful for administrative functions. Meeting agendas and minutes are posted, organizational policies are shaped and defined and interactions between staff can be shared in open conferences so that not only are all members of the organization familiar with ongoing developments, but the applications of solutions and concerns in one community can be shared in other communities.

The site coordinators also gather once a year for a 2 day face to face inservice. This inservice cements the personal contacts by placing faces to text and voices that staff have been associated with over the past year - often with amusing results!

Conclusion

As a pilot project with a mandate for innovation, Contact North/Contact Nord offers an ideal environment to explore the role of local educational support workers within a "developmental orientation" to distance education. The activities and functions of the site coordinators are influenced by the delivery institutions, the organizational structure of Contact North/Contact Nord and the communities in which they live. The role is evolving and changing but promises to strengthen and empower students to facilitate active participation and ownership in distance education programming in their own communities.

Viewed as an active community educator, the local site coordinator in a distributed network like Contact North/Contact Nord becomes a bridge between successful distance learners and educational institutions who view delivery as part of the process of education.

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Student Support System
in The Open University of Israel

Ruth Arav

STUDENT SUPPORT SYSTEMS
IN THE OPEN UNIVERSITY OF ISRAEL

The Open University of Israel (OUI) is already thirteen years old. During these years we have developed a number of unique ideas and teaching techniques for self-study. We have also instituted various systems directed towards student support.

This paper reviews the different support systems which already exist in the OUI or are currently being developed or planned.

During many years of contact with our students we pinpointed some crucial problems that they often encounter. One of the major problems is the necessity of studying by themselves, far from fellow students and lecturers. In addition, many OUI students have to contend with a lack of learning skills and study techniques combined with an inability to organize their self-study time to fit in with work and family obligations.

Another problem which faces the students is to construct an adequate list of courses, organized in an appropriate sequence, which will lead them to the "right" kind of B.A., in accordance with their abilities and ambitions. The fact is, that it is very difficult for a student who lives in a kibutz in the Galilee (in the north) or in a small town in the Negev (in the south) and works eight hours a day, to travel to the OUI in Tel-Aviv in order to get the right advice from a senior academic counsellor or to meet with course coordinators or other staff members, who could help him/her solve his/her problems.

We, the members of the staff of the OUI, are aware of these problems and are constantly trying to overcome them by establishing new support systems at the OUI.

Soon after establishing our courses we offered extensive tutoring of some courses in response to the demands mainly from preorganized groups (groups of students, usually organized by community colleges, banks, other places of works etc.). Instead of six tutorials in a semester, the students were offered 9-18 tutorials. Thus they would meet every week or so with their tutors, ask questions they could not solve, make friends with fellow students and hear a lot more about the subjects they were studying.

Since the first semester the extensive tutoring was offered, over 40% of our students have chosen to study this way. Dr. Margalit Ganor, the head of evaluation department in the OUI, will discuss the success and the problems of the extensive tutorials in another paper presented at this conference.

In 1983 a new function was initiated at the OUI with the sole purpose of helping the students overcome their difficulties as independent learners: The Study Support System. The study support system consists of eight counsellors, all of whom hold an M.A. degree in education with specialization in student support. They started by addressing letters to all the students who had just enrolled in the OUI, in which they are offering their assistance in solving any study-related problems the students might encounter: difficulties in integrating the studies with their work schedule, difficulties in summarizing the study materials and in writing the home assignments, or even difficulties in sorting out bureaucratic entanglements. The student can just phone or write to the counsellor and arrange a personal meeting with him/her in order to get help.

The study support counsellors have strict instructions to refer the students to the senior academic counsellors whenever their problem is of a purely academic nature (choosing their first course, constructing an appropriate curriculum in the discipline they wish to study, etc.).

Very soon after the study support counsellors started to work, it became evident that they are indeed needed. The students who turn to the counsellors for help frequently lack a matriculation certificate, they are older than the average OUI student and are often characterized by a lack of confidence in their ability to study academic subjects. They find the study support counsellors to be of great help and often keep in touch with them until they feel that they have acquired the ability for independent study.

Though the work of the study support counsellors is very important and useful, especially for new and weak students, there still remained a need for another system of support to assist the students who keep at studies and help them get through their years of study in the particular academic field they have chosen. Some students need help after they have studied one course in a certain subject area, not knowing what course to study next, others are faced with a problem of having to write their first project or seminar paper and do not know how to tackle such an assignment.

In response to these needs in 1986 we started to develop a new system: The Personal Tutors System. This system, being very costly, has so far been made available, on an experimental basis, to around 600 students. The 18 personal tutors were drawn from a pool of highly experienced tutors. They receive a list of 30-40 students who live in their area and study courses which are within their academic field of specialization. The tutor get in touch with those students and arranges an introductory meeting with them, often at the tutor's house. From then on the student phones or meets with his personal tutor whenever a problem arises.

An evaluation of the personal tutors system is presently being carried out by Dr. Ganor. However one point which I feel should be emphasized already at this point, is the fact that the system was most needed and also most successful in the periphery of Israel. It seems that students who live in the center of the country have more options available and often seek help from other members of the OUI staff.

Being a student of an Open University with a wide choice of courses has its advantages, but it also has its disadvantages. Students who know exactly what they want to study, who choose courses not for their attractive names but in accordance with academic recommendations of what to study first in order to understand a more advanced course,are few and far between. Students who before choosing a course go to the library and make sure they know the prerequisites are quite rare. Most of our students do not exactly know what they should choose, and are badly in need of academic counselling. They often choose the wrong course and find that they made a mistake only when it is too late to change. They become frustrated and as a result cease to study at the OUI.

Early this year, the academic committee of the OUI has decided that from 1990 all students who declare that their aim is to get a B.A. degree will have to consult with an academic counsellor before they enroll for an OUI course. In other words, counselling will become compulsory. In order to implement this decision we have started to construct a new network of Regional Academic counsellors, which began to function in April of this year. 30 academic counsellors were chosen among counsellors from the study support system, from the personal tutors and among the academic counsellors in colleges in which OUI's courses are being taught. They live all over Israel and have fixed hours during which they meet students in various study centers. Before they started to work they had several days of concentrated training given by the senior academic staff of the OUI. They were given all the information necessary for academic counselling. They were told which are the "easy" courses recommended to start with at the OUI, what questions are frequently asked by students and so on. They were also given a "counsellor's file" containing information regarding the different academic committees the student will encounter during his/her studies, e.g., the committee for Accreditation of Previous Studies and the committee of Degree Programmes. In addition, this file which will be continuously updated, contains information on all the academic decisions made at the OUI as well as information on registration procedures, library facilities and other aspects of academic studies at the OUI.

The counsellors have to fill in a Counselling Report Form for each student who seeks their advice. This special form will include a list of the courses the student has studied, a list of courses recommended by the counsellors and other relevant information exchanged in the counselling session. These forms are sent by the regional counsellors to the senior academic counsellors at the OUI. The senior counsellors will examine the forms, approve them and comment on them, and then return them to the regional counsellors. We hope that by this way the regional counsellors will practice and improve until they will be able to work independently. The 30 regional counsellors have fixed days and hours during which they meet students. They are spread all over Israel in ten major areas, from Tel-Hay on the Lebanese border to Eilat on the Red Sea.

Being regional counsellors does not imply that they will cease to act as personal tutors or study support counsellors. They carry out these various tasks at different hours. The fact that we have started this new system of regional counsellors all over Israel does not mean that our senior academic counsellors will cease to meet students for counselling. On the contrary; they will continue doing so in addition to examining the Counselling Report Forms they will start to receive from the regional counsellors.

A new system of student support which is being established these very days, is the Dean of Students. The need for such a function has become more and more evident during the last years, when increasing numbers of students have joined the OUI. Among them there are always to be found students with special needs, cripples, prisoners, very poor students or students suffering from mental problems. Because of the absence of a dean of students, the students turned to a number of different offices of the OUI, complaining, demanding, requesting. However there was never a central office to deal with these problems or to refer them to the appropriate staff members.

Two years ago, Dr. Yael Enoch and Dr. Ruth Arav suggested the construction of the dean's office. The dean will be the head of the scholarships' committee, will create a loan fund, will act as an Ombudsman and will deal with personal problems of students. Our suggestion was that the regional academic counsellors will also act as "sub-deans" and will report to the dean about their meetings with students who turned to them for assistance.

On April 1989 a decision was made by the president of the OUI to construct a dean's office in the very near future. The appointed dean has just assumed his duties.

It is known that being a student at an Open University is very difficult. The typical student is a mature person, who works for his/her living and has a family to support and care for. Furthermore, the OUI student does not have a campus to ask questions or libraries to find answers. We hope that these four systems of student support will be effective in helping the students to achieve their goal - the B.A. degree.

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staff can "connect" with each other and with students via computer, telephone and FAX to help interpret and manage selected research trips through that world.

But that is the potential: What is the reality? Do learners even know what they ought to be able to expect from a library? Do institutions set up infrastructures to promote connections between librarians and educators, librarians and learners, librarians and librarians? Do librarians operate with adequate or appropriate conceptual models? Do librarians want to learn more about learners and learning; should they, in fact?

We know what the four answers to these questions ought to be, but what are the answers at the moment?

Our research in 1988 focussed on these and other questions. It was our opinion that a publicly funded research project should do more than simply collect descriptive statistics via survey instruments sent to librarians; rather, it should dig at the needs, opinions and preconceptions of the client group and involve the researchers in proposing realistic but innovative, even provocative solutions. Our choice of project title, Developing Partnerships, proved to be more an idealistic one than an actual descriptor, but more of that anon.

The project was funded as part of the Province of Ontario initiative called Contact North/Contact Nord (CN/CN) to promote distance education across Northern Ontario. The Northeastern Regional Coordinating Centre of CN/CN allocated the major funding for the project with assistance from the Ontario Council of University Continuing Education (OCUCE), OISE and Laurentian University. The study was directed by four major objectives, and was supported by specified assumptions.

Interaction Versus Independence

The Dilemmas in Designing a Computer Mediated Communications Student Support System

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Introduction

This paper explains something of the background to CMC in the Henley/Brunel MBA Programme, the design considerations and implementation. The final part deals with some of the issues surrounding the use of CMC in relation to increasing interaction between tutors and students whilst maintaining a balance between this and the costs of tutoring and student independence.

Background

Since 1984 the College has registered more than 3000 distance learning students on its MBA programme and 1000 on a diploma course. For the MBA multi-media course materials (video, audio, text) are estimated as requiring 1200 hours study. Project work requires a further 800 hours.

Students come from over 50 countries. Most are concentrated in countries where Henley has a local centre providing support (eg. Singapore, Malaysia, Hong Kong). In the UK, centres are being established to provide support locally to distance learners (tutor access, workshops, computing and library services).

For students working directly with Henley, student support takes several forms:-

1) A telephone fax help service
2) 18 days of workshops with considerable flexibility for attendance
3) Feedback on submitted assignments
4) Tutoring for project work (by correspondence in the main)

This open programme is designed to impose few constraints on the student. Attendance at workshops is not mandatory. Four exam sittings take place annually and students can opt when to present themselves. The workshop programme follows the exam cycle. Weekday and weekend workshops are available.

Overseas the pattern is different. Centres agree a programme to suit their own local market.

In UK centres programmes are also less flexible than for students working directly with Henley. Students follow a more structured route.

The other main group of students are those on tailored MBA's. These are offered through employer sponsored schemes and design takes into consideration company specific requirements. These programmes, whilst offering some flexibility to individuals, are more structured than Henley's open programme. Students share some workshops with those from other companies in the scheme.

In July 1988 the College decided to implement a system of Computer Mediated Communications, Henley Extended Learning Programme (HELP). The system offers the following possibilities:-

1. Electronic Mail between all participants. (Programme managers, administrators, overseas and local network managers, external tutors, students and company sponsors).
2. A conferencing facility available to any registered user.
3. Access to databases for research (Henley library,external services such as PROFILES).
4. Delivery of course materials including self assessment exercises.
5. Simulations and business games
6. Closed User Groups (for company programmes, tutors-only or network managers-only).

Initial System Design

The initial concept of the HELP service was to provide students with a higher level of support by quicker response to queries and by the 'electronic classroom'.

The earlier hot-line service, a telephone, had not proved totally satisfactory. Few queries were actually made. Those that were tended to be taken on an answer phone and if complex the transcription proved difficult. The tutor asked to respond would often have to phone the student to clarify the query. This presented problems for tutors. They already have a heavy work-load, may not have a secretary to help and may experience difficulty making contact with the student who as a manager has a heavy schedule.

A fax machine was introduced to overcome some of the difficulties. Queries sent by fax are dealt with within 48 hours during the working week.

The Computer Mediated Communications was seen as having the potential to improve these earlier methods. Tutors whether in the College or remote can respond at their own convenience. Queries can be logged at one point and materials revisions incorporate changes to overcome 'problems'. By using a conference for queries the student can have access to a databank of queries and responses. Periodically the tutor can edit the databank to keep it current.

In order to create this several prerequisites have to be achieved for tutors:-

1. Tutors have to have easy access to appropriate equipment.
2. Tutors have to accept the legitimacy of the benefits to students and themselves.
3. The system has to be designed in a way which tutors find user-friendly and supportive of the programme objectives and their personal aims for their subject.
4. Tutors have to be trained in the effective use of the system.
5. Tutors have to be shown the full possibilities of the system and be supported when initiating their own course-ware development.

For the system to provide effective administrative support many prerequisites also have to be met. For tutors, the system is a vehicle for ongoing communication with tutors themselves deciding how best to service their own subject. In contrast, in the administrative area the system is capable of providing course information and enabling students to book workshops and handle general queries. However, for this to be effective, the hard-copy information needs careful review to ensure that it is being put into the Computer Mediated Communications in an appropriate format. Course organisers, workshop information, meeting dates, news items, course updates and assignment updates all can be stored within the system. As the transition from a totally paper-based to total Computer Mediated Communications is a slow process a dual system has to be developed. An efficient paper-based system may not translate immediately to Computer Mediated Communications and resources and commitment have to be found to operate both systems during transition. A key to student adoption of Computer Mediated Communications is seen as resulting from reduced availability of information from the paper-based system.

Turning to the students, the following issues have to be addressed:-

1. Access to appropriate equipment
2. Training in its use
3. Encouragement to use the system
4. Payment for use of the system

Since few students spend time at Henley the system has to be extremely user friendly with minimal difficulties in gaining access i.e. straight forward equipment and connection, simple user guides, few instructions needed for entry, effective internal help services once on the system.

The initial feasibility study was to last over a three month period. Those responsible for the management of development, some tutors, administrators and students had access and were encouraged to use the system.

Much activity during this study centred around developing the system. As with all systems of this type customisation is necessary. Prior to use of the system it is difficult to specify the customisation needed. Constant use led to the creation of a 'priority list' for system development.

This period was also used for training. Key users had an opportunity to learn how to use the system effectively. Manuals were prepared to assist remote users and tested.

The frustrations of the system were experienced and energy expended trying to resolve these. Particularly frustrating amongst these was the inadequacy of telephone connections and the PSS system. Without this operating effectively the system has little chance of success. Individual users soon become frustrated if swift connection proves impossible and nothing is more likely to cause them to abandon the system in favour of traditional systems, the reliability of which are known and difficulties expected.

Another difficulty during this phase was to get those involved to concentrate on priority items. As people began to recognise the possibilities offered by the system they let their imaginations rip and consequently experimentation was called for rather than completion of preliminary steps. Even establishing priorities was difficult when time estimates for doing work elements were elusive.

Implementation

Following the feasibility phase a decision was taken to concentrate upon certain target groups for implementation. It was recognised that individual students may experience difficulty purchasing equipment due to cost, installing it due to inexperience and lack of skill and finally find the running costs high. Students linked through our network of colleges were seen as less likely to need the service because of their proximity to centres where advise is available.

A decision was taken to concentrate upon corporate programmes. Internal networks with electronic mail services were believed to offer the infrastructure necessary to support the system. The costs to students would be very limited. Corporate sponsors were believed more receptive to the application of new approaches and hence more likely to fund the development.

Unanticipated time has been taken up in the process. Whilst the system is hosted on a VAX in London and all processing done on this machine, one company had grave reservations about security if their internal mail was to be linked in anyway to the host.

Resistance in another company surrounded issues about the time given for study during working hours. It was assumed that if the facility existed students would divert attention to study from normal work routines.

Also it appears that management development managers have difficulty appreciating the possibilities offered by this type of system. It is not something with which they have personal experience, the language is alien and they appear to feel threatened by the prospect of having to argue a case to superiors.

In implementing the system considerable time had to be expended dealing with these issues even before tackling the concerns of students. This time has to be diverted from developing the system itself and without the development effort the system looked to have limited facilities.

Identifying a target user group during this phase was essential. Early success is vital in any project. The other important decision involved which tutors to engage. Not only did we need to select tutors capable and readily willing to support students by giving good quality and timely responses but they must be willing to become 'masters' of this new system. One group was self-selecting - the co-ordinating tutors responsible for company programmes. There was choice for subject tutors.

Costs of providing access to tutors became a key consideration. Not all tutors could be provided access and the decision about which tutors to engage was based not only on academic suitability but also on level of interest in the system and enthusiasm for using IT.

Interaction Versus Independence in Designing CMC Support

The primary objective of the MBA is to improve the performance in managerial roles of participants. One stated objective is to develop a strategic view of the management of organisations. Managers at senior levels are stereotyped as tough, independent, decisive, intelligent and high on leadership skills. Those seeking to qualify as MBA's en route to executive posts are often in a hurry. The qualification is seen by many as a means to an end and increasingly necessary for a fast-track career.

Tutors usually expect MBA students to be very capable and relatively independent. Students showing signs of 'over dependence' are seen by tutors as unlikely to make the grade. The qualification 'over-dependent' is probably applied to some students who on many other courses would be classed as questioning and interested! Students probably start out on their programme expecting to understand distance learning materials; after all they are not the first cohort to use the material. If they find errors they are highly critical. Student counselling is confined in the main to problems of motivation to complete course units. Career counselling is expected to be provided elsewhere. Informal meetings enable students to raise these issues in a more comfortable and conducive atmosphere.

As potential executives students are expected and encouraged to use the resources at their disposal. If employed in medium sized or large organisations they should seek access to functional specialists able not only to explain concepts but also relate theory to practice. Assignments and exercises encourage use of organisation practices and 'fact-finding' from relevant personnel. This has several purposes - students relate learning to practice, students learn how to use resources effectively, students extend their network of contacts and understanding about their own organisations.

Given all these assumptions about how students will respond to the course materials, the preconceptions of effective executive behaviour and the need to be seen as independent, what is the role for CMC?

Looking at CMC from the perspective of the educational provider another set of conditions must be examined. Tutor-time is expensive and increasing cost is outstripping inflation. Increasing demand for management education is exacerbating the problem of 'stretched' resources. CMC is expensive to develop and maintain (hardware and software) and tutoring costs on the system can be high. Unlimited access through electronic mail for a large number of students is seen by many academics as a potential nightmare. Time devoted to electronic conferences is time diverted from other activity.

Whilst this might apply to the college-based tutor, those working remote from the centre are likely to view it differently. Rather then contact being confined to correspondence remote tutors can 'talk' to tutees and give speedy response to help overcome problems. Relationships can be developed more effectively between tutor and tutee by a network of tutors and administrators.

The cost structure of providing student support will be changed. Communication costs (post, telephone) can be moved largely to the student. The savings can be devoted to providing equipment for tutors and a higher level of tutor contact.

The system itself can be used to monitor usage. Tutors may need payment for time spent. Students not using the system can be contacted to check progress and commitment.

All these factors have to be balanced in the design of the system. Our initial measures aimed at students and tutors maximising the benefit include the following:-

1. Conferences are of several types - CMC and its use, general help services, news and chat, subject related, business themes.
2. Each conference is managed by a named person. The manager starts off by stating purpose and usually inputs a discussion point. The conference manager is then expected to focus discussion if necessary. Summaries may be useful and provide background to future conferences.
3. Where the conference is aimed at solving problems of understanding the tutors may 'stage manage' initial entries asking colleagues to input former queries in order to make students feel comfortable asking questions.
4. Background papers are put into the system to focus debate.
5. Conferences are task focussed dealing with defined elements of the course or interest-based to discuss key themes or ideas.
6. Closed-user groups are set up to give a sense of group identify and to limit student access to all tutors and administrators.
7. The CMC provides information from Henley as well as access to public information services. Students can get easy access for research purposes thereby improving the quality of their assignments and projects. Research time can be reduced.
8. Information available on the system is not available readily from other sources eg. how to analyse a case study, self assessment exercises, examination questions and reviews.

Information is being accumulated and made available. By storing data future students will be able to access it to resolve their queries and test their understanding of the course. Students will be encouraged to take greater responsibility for their own learning using a system to organise and manage their own discussion and debate. The student is being encouraged to use not only the tutor as 'expert' but also other contributors to the system.

The long term aim it to provide an enhanced experience for the distance learner without increasing tutor dependence; increasing opportunities for interaction; increasing the possibility of students having access to learning resources.

Conclusion

At this stage it is too early to report on outcomes. The system is still under development both technically and in application. It is not anticipated that development will ever cease. The system offers opportunities limited only by the imagination of tutors and students to find applications.

However as part of the development process there is constant review and concern to develop a better understanding of many of the issues raised here.

Interactive Libraries; Dimensions of Interdependence

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Paper for the ICDE - O.U. Conference
"Interaction and Independence"
September 19 - 22, 1989, Cambridge, U.K.

"Interactive Libraries; Dimensions of Interdependence"

In 1988 a research team at The Ontario Institute for Studies in Education (OISE) completed a study entitled Developing Partnerships that documented and analyzed the based services for distance education students in Northern Ontario.

This research study focussed in effect on two dimensions of interdependence in distance education: the learner and the available library services, and the librarian and the distance educator. We believe that without paying careful attention to the development of these two dimensions, the third level of interdependence - the learner's interdependence with peers and tutor during the actual course - will not be reached.

In fact, this third level should be possible now more than ever before. The technologies exist today to facilitate real and delayed time interactions so that one learner may "talk" with peers, a tutor, a guest instructor, librarians, counsellors and adminstrative staff. But that interaction, that interdependence, demands more than just reliable technologies. It demands students who feel assertive, are in control and are able to interact with a variety of learning resources and staff services. Interdependence also demands material resources and staff services from libraries. Those resources and services, and their "mix" are now becoming more accessible to distance learners. Librarians and their materials can connect in ways they could not dream about five years ago: databases exist to present much larger "worlds" to learners, and library

Objectives, Assumptions and Issues

The objectives were to document the following: how distance learners currently manage with the present level of material resources and human services available from various libraries; what problems with resources and services are experienced directly by three constituencies -- the students, library staff and faculty; what ideas these constituents have for upgrading material resources and people-based services; and finally, what changes or continuities in library practice are needed in order to carry out realistic and creative recommendations for distance education development up to 1990.

Four basic assumptions supported the project design. First, distance education must now be more clearly defined: distance may in fact refer to psychological, economic or cultural separation, as well as to geographic distance. In fact, a high proportion of Canadian distance education students live in urban areas (Lumsden, 1988; Spronk, 1988), a phenomenon evident in other countries as well.

> 'Distance education' refers to those forms of organized learning which are based on the physical separation of learners and those (other than the learners themselves) involved in the organization of their learning. This separation may apply to the whole learning process or only to certain stages or elements of it. Both face-to-face and private study may be involved, but their function will be to supplement or reinforce the predominantly distance interaction. (Tight, 1988)

Second, the process of adult learning should enable the learner to confidently use her/his own knowledge and experience as well as that of others in the active construction of meaning, that is, adult learning should not place the learner in a situation of passive dependency and uncritical acceptance of others' knowledge. Third, those active and skilled learners will use their abilities to think critically and creatively in the development of their local and regional communities.

Fourth, library staff can be skilled and proactive mediators between information and the learner, a stance that is antithetical to the custodial concept.

Literature Survey

The literature survey revealed four types of studies: The traditional 'how to' (American Library Association, 1982), literature reviews (Haworth, 1982), allusions to library service within a general distance education context (Mugridge and Kaufman, 1986), and descriptions of actual services (Scott, 1988; Off-Campus Library Services Conference (Central Michigan University) Proceedings 1987, 1986; Gray, 1986; Miller, 1984; Winter, 1984; and Payne, 1982.)

With the exception of two writers (de Silva, 1988; Affleck, 1987) very little of the literature base informed our study. Discussions tended to be descriptive, empirical research virtually non-existent, and conceptual thinking extremely rare.

Crossing over into the literature of library service to adult learners in non-institutional settings, we found material of varying usefulness. In the U.S., discussion began with the landmark study by Smith (1954), but there have been few studies addressing the issue of the way in which adult learning processes should affect the work of library staff. Fine (1984) points out that library-based researchers do not focus on ways adults obtain and process information via library systems nor do these researchers attempt to develop a theory of user behaviour. Burge (1983) offered one proposal for a learner-centred view of adult services, but generally there is little evidence to suggest either strengthened ties between distance educators and library staff or the development of an adult learner-centred model of library user behaviour.

The Survey Instrument

We cannot do justice here to the development of the survey instruments, but each constituent group of respondents - students, university and college library staff, public library staff, and faculty - received a different questionnaire. Copies of the full questionnaires are published in the project report, available from CN/CN in Sudbury for a modest price. A total of 1750 questionnaires were mailed out. Response rates varied from 85% for university and college library staff, 50% for public library staff, 39% for faculty to 29% for students. Various statistical and coding procedures were used to analyze quantitative and qualitative information and we acknowledge the collaboration of other research staff at OISE and the invaluable advice and critical comments of the two advisory groups of librarians established in the earliest stages of the project. In addition to written data, we collected information from face-to-face and audio conferences with college, university and public librarians.

Results

Only a few highlights from each constituency can be included here. Readers are referred to the full report for statistical and descriptive detail. Public library staff responses indicated that students were known to use local public libraries but that the library staff knew very little about their programmes of study. Little use was made of a variety of communications technologies, but librarians were keen to exploit them if the issue of costs were solved. Staff were also open to learning about how adult learners function, but admitted very little existing knowledge.

Academic library staff admitted little or no involvement in course design and some feelings of isolation from distance education administrators. Staff also listed a range of factors contributing to inappropriately low levels of services, and they struggled with solutions to beat the evident strains involved with distance education clients.

Instructors generally accepted prime responsibility for informing students about library services, yet appeared to take little significant action.

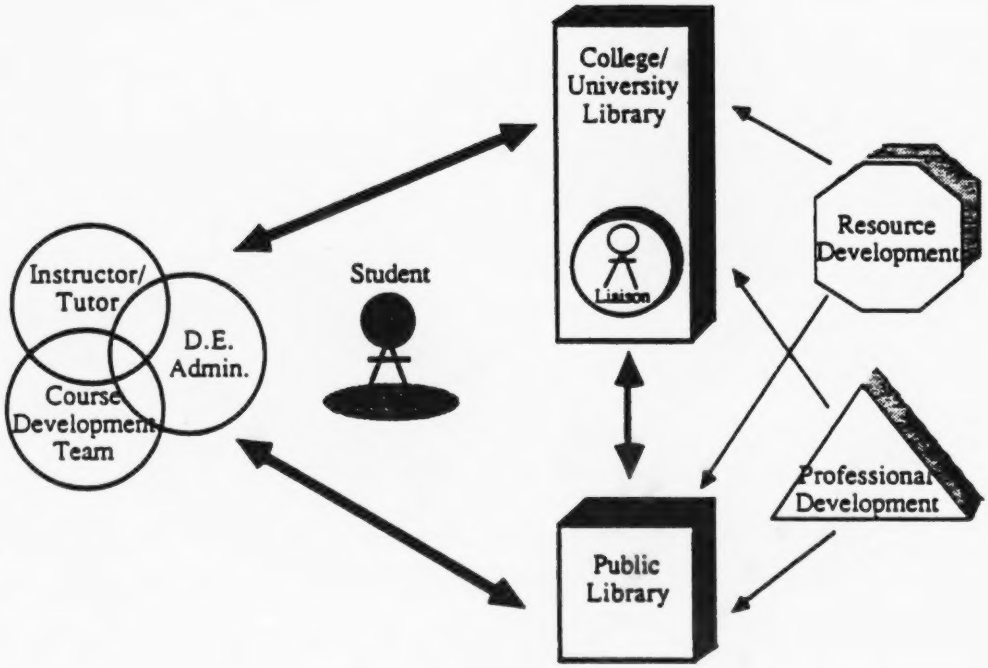
Student's responses generally indicated low and very traditional expectations of library services, and inadequate knowledge about them anyway! In short, very few constructive, dynamic or integrated library-education contexts were discovered.

When asked for opinions as to what the role of the library staff should be, respondents indicated that teaching information-gathering skills, supplying information, and helping students find information for themselves were all important tasks. There was some agreement that the library staff member is a valuable part of a course design team.

Recommendations

The data we received and the conclusions we drew from them made us consider developing recommendations that were not only practical, feasible, and gently provocative, but that would be situated within a conceptual model for interactive libraries. The model we developed to house our recommendations has familiar components if you look at each individually, but the challenge in this model lies in the interdependence of those components.

[See figure 1 next page]


College/ University Library
Liaison
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Course Development Team
Student
Professional Development
Public Library

Figure 1 : Developing Partnerships Model

A second challenge lies in our refusal to promote the already dysfunctional levels of exclusion faced by library staff within their own institutions, or by students faced with the world of librarianship. We found that exclusion operated under one or more of these conditions:

- inadequate or no intra-institutional communication between library and distance education staff;

- "one-shot" orientation-to-library approaches to students;

- course designers who build library-based services out of courses;

- library staff who lack the knowledge of basic educational theory that would have otherwise allowed them to build partnerships with course designers and tutors based on the use of some common language about how adults learn;

- students who are totally invisible or anonymous to library staff -- not seen, not talked with, not written to;

- library staff who lack incentives and rewards to push themselves and their services beyond the familiarity and comfort of traditional routines;

- educators who adopt the transmission model of teaching ("give 'em fish") and who do not expect students to develop their own "fishing rods". (Burge, Snow & Howard, 1988)

We believe that exclusion ought to be reduced and interdependence encouraged by a dependence on seven key mechanisms that operate within the model: 1) Programme and course planning, 2) services marketing, 3) resource development, 4) professional development, 5) services and materials delivery, 6) technical communications, 7) data access.

Each mechanism carries with it certain recommendations that are specific to the Northern Ontario context, so for an international context we will select only one recommendation here for each of the seven mechanisms, in the hope that each mechanism will be accepted by readers as generic and capable of generating its own context specific guidelines for innovative practice.

With programme and course planning, our recommendations were based on the assigning of responsibility for distance education services to one library staff member, and adherence to an annual timetable of information transfer between library and distance education administration. These sound very obvious, but they do not happen automatically!

Regarding services marketing, we pleaded for advertising of professional quality - in part to compete for attention from adults already used to high quality public graphics and message design encountered in their other life roles.

Resource development refers to the most often cited problem with distance modes of learning - the provision of material resources that are adequate in quality and appropriate for the levels of learner ability evident in a course. One key recommendation was the proposal of a 35-40 square metre study space in public libraries, in part to help existing learners, in part to draw visible attention to the fact that lifelong learning is a reality for large numbers of adults. The other developmental mechanism concerned staff in libraries, and this one we saw as a major and urgent need. Librarians must have some familiarity with the concepts and facilitation practices of adult learning and the anxieties and needs of adult learners: we suggested therefore that librarians should use distance modes for their own learning, plan their own professional development, and involve interdisciplinary resource people to guide that development. We also suggested that the government set up a field development fund open to competitive bidding so that librarians, in ways similar to faculty, can apply for research and development monies.

For services and materials delivery we wanted to see, for example, standardization of video formats, headphones for video use in public libraries, FAX delivery of documents and Priority Post delivery of parcels. We did not stress computer conferencing because that asynchronous method of communication has only begun to be established, although this technology will be increasingly used to develop interdependence.

The technical communications mechanism should be strengthened by the provision of 24-hour toll-free telephone answering machines for all academic libraries, and a FAX machine for each academic and public library. Data access, the seventh mechanism to operate the model, is one that should become much easier to implement as libraries become more "connected" with each other. We recommended that an existing network linking most of the public libraries be reviewed and strengthened, because for many learners, the local library is the "one-stop shop" that should theoretically open many doors at the touching of a keyboard or the dialing of a phone.

Models and mechanisms are one thing, reality is another! We believe in the entrepreneurial potential and willingness to learn of library staff and we acknowledge the goals of educators for greater student satisfaction and success in distance courses. But neither will become reality until librarians and educators become more interactive and more interdependent in their own roles and relationships. Quality distance education requires an ongoing partnership between individuals and institutions: it is up to the administrators, teachers, library staff and students to make these recommendations a reality.

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TUTORING IN TECHNICAL SCIENCE: FROM FREEDOM TOWARDS REGULATION (AND RESULTS)

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1 Introduction

One of the seven fields of study at the OU of the Netherlands is Informatics and Information Technology, which is based in the Department of Engineering. Many of the OU students choose not to follow a full academic degree programme in Informatics, but rather wish to take a short programme. Accordingly the Department has introduced a so-called 'shell-model' into the curriculum for Informatics, which consists of a number of Short Academic Degree Programmes (SADP's). One can choose to follow a route of several SADP's, finally leading to a Full Academic Degree Programme (FADP). The successive SADP's are like shells enveloping each other and making it possible for students to stop at any moment without leaving with a collection of courses that is useless to them. In the curriculum that is currently being developed, the student can stop after 200, 800, 1400, and 2000 hours of study, or could finally go on to 5400 hours (FADP).

Students in the Department of Engineering acquire knowledge in various subjects in the fields of informatics, information technology, and mathematics. This covers from very practical aspects to the conceptual and theoretical. In addition the Department emphasises 'doing'; students acquire skills in the following fields:

i) 'design and build' in a very large number of subjects, such as algorhythms and computer programmes; datamodelling and databases; information sytems; knowledge systems; digital systems; operating systems.

ii) problem solving which plays a dominant role in mathematics, and in courses close to mathematics like formal languages, the basics of artificial intelligence, and automata theory.

Every student who has chosen a programme in informatics starts with the course Introduction to Informatics. After completing this course, a student can take five other courses, of which each is built upon one or more blocks from the introductory course. The combination of the six courses leads to an SADP of 800 hours. This SADP is called the Foundation in Informatics Programme and contains the following courses:

* Introduction to Informatics (II), a 200 hour course,
* Information Systems, introduction to design (IS), 100 hours,
* From problem to programme (PP), 200 hours,

* Datamodelling and databases (DD), 100 hours,
* Digital electronics and microprocessors (DM), 100 hours,
* Computer networks (CN), 100 hours.

2 The application of distance learning concepts in informatics

The concepts of distance learning in informatics find their place primarily through extensive use of printed self-study material. In addition to the printed material, computers are used for practicals, simulations and computer-assisted learning. For instance, in the DM course students have to design. In addition to the printed material of CN, students use a simulation programme to design a local area network. Also, videos can provide the extra needed support. In the IS course students have to design and describe parts of an information system with the help of realistic case-studies, supported by video. The videos show what kind of information needs and problems have to be met (two are already finished: one about a factory and the second concerning a hospital). Finally there is the possibility of personal and group tuition at the study centres. The first category of skills 'Design and Build' in particular demands a practical component.

A great deal of attention is given to supporting students through personal contacts, workshops, or the correction of work completed at home.

3 A closer look at tutoring

In the courses put on by the Department of Engineering there is considerable possibility for an approach where theory and practice are united to a considerable extent. This has a great advantage from the teaching point of view as abstact notions are arrived at step by step out of concrete problems and situations. It is also desirable to work in this way because of the direct relevance for professional practice of individual courses and the SADP even from the first level. The OU offers education which is therefore more attractive to the labour market and the student through this orientation of practice.

3.1 The definition of tutoring

A definition of tutoring in informatics terms, within the field of distance learning, might be:

> tutoring is a soft interface between the 'hard'
> course material and the individual student or
> group of students.

The course material which has been developed is tuned to the average student with a particular background. In reality this average student does not exist. In the printed material one can consider a wider spectrum of students, but it is impossible to consider every student's wish or background. Tutoring can be a flexible interface. At present it is the only possible interface, as the computer and software is still not good enough to function as a flexible tutoring machine.

It is worth mentioning that in the current development of a course on discrete mathematics, the course team has chosen a partially computer-based approach. The computer wil be used for discovery. In most of the four hour units of the course students will 'discover' a new concept or principle in a computer session of 15-20 minutes. The hypothesis is that this creates positive appreciation of the subject, on the basis of which students can better and /or faster assimilate the subsequent more formal treatment of the printed material.

3.2 The aims of tutoring

General aims

Tutoring of the integration of theory and practice provides a necessary sounding board for the student. During the design as well as the problem-solving stages there is the need for student creativity. Feedback is needed on student work and an important part of that can be constructed in the written material via tasks and tests, and variations on these. Of course, if these tests etc are the only offering this will not promote the student's autonomous activity, and this will have the effect of undermining the objective of many of our courses, ie to develop design or problem-solving skills.

Moreover, written solutions cannot do justice to the enormous diversity of solutions which are possible in many situations. The range of quality of solutions requires feedback from the tutor and fellow-students. Accuracy in problem-solving is not the most important skill, students equally needing to gain 'design-skills' during the design process. The problem given to the student to solve provides only the means to an end.

Special aims

Experimental setting: the five courses following the Introduction to Informatics are offered within an experimental setting. This means that the appearance of the material is plainer than usual, and therefore less expensive to produce. In order to evaluate the course thoroughly with students, tutors and the course team we sometimes trade development time for an increase in tutoring.

Practical work: some practical work cannot be done on an individual basis. The tuition of groups of students can provide a solution to this. For example in the DD course students have to develop an integrated data model out of several parts. These parts are developed in diferent groups and after re-organising the groups the integrated model can be developed.

For some practical work students need a computer, and since not every student has a computer at home they have to go to a study centre where they also get support from a tutor. Most of the time the tutor has to grade the results of the practical work and so in some courses the tutor will need to discuss the work with the student.

Initial or foundation level tutoring: up to this point we have discussed the rationale for tutoring in terms of content and teaching methodology, but there are also more general reasons for its use. Amongst these the main one is that tutoring can increase the effectiveness and efficiency of the student's learning process, in particular leading to improved motivation, better discipline, more custom-made feedback on the study-related activities, learning from fellow students, gaining an academic attitude, etc.

Course tutoring: the integration of theory and practice in the course material requires an integrated approach to tutoring. Overall this means tutoring where initial course tutoring and the support of practice are firmly interlinked.

3.3 The design of tutoring

The Staff Tutor (a member of the Department) is responsible for designing the tutoring for all courses. The following questions have to be discussed with the course team leader:

* how do we relate cost and benefit? Can we afford it?
* which form of tutoring is best suited for a given situation (eg, large v. small number of students, excessive integration of theory and practice v. their separation)?
* how intensive should tutoring be? (What should be the proportion dedicated to face-to-face contact?)
* within what context of organisation and planning will tutoring be organised? (eg, start of course at any time v. a fixed start date, freedom of pace v. regulation?)
* how can we bring in tutoring alongside the philosophy of the OU of distance higher education (especially for students who choose it for those very reasons or who have to choose it through their own circumstances)?

The regulation of the number of students and the organisation of tutoring depends on the specific course content and the chosen model for teaching, but most particularly on the number of students per course. The course content determines the number of student activities for which feedback and/or support is required. Individual tutoring is impossible on financial grounds if a great number of activities is required and a great number of students apply. It is evident that with a large number of applications to a course the regulation of students will be needed.

Tutoring in groups can be one solution. It is much cheaper than individual tutoring because the efforts of the tutors can be shared by a group of students. In order to make tutoring as effective as possible the method of working should never (or seldom) possess the characteristic of teaching, but will have the form whereby the students work by him or herself or in small groups. In addition to the financial grounds there are didactic advantages connected with tutoring in groups. There can be structured consultation about solutions to problems in relation to the course material between the students themselves as well as between the tutor and students.

Discussions can take place about problems and solutions, through which communication and presentation skills are improved. These qualities are of course very desirable for people working in the field of information technology.

We are aware of the disadvantages of group tutoring. These are especially severe where the original philosophy of the Dutch OU is concerned. For example, the students cannot start a course at any time, but have to choose bewteen a number of start dates per year. Secondly, the pace of study cannot really vary per course, although a student can choose between a higher or lower workload by taking more or less courses at the same time. Finally, the freedom of time and place is clearly restricted because presence in the study centre is required at a certain time. In the many contacts we have had with students and tutors up till now we have had no signals that the disadvantages mentioned above represent big problems. On the contrary, advantages are perceived rather than disadvantages. If there are students who cannot manage at all with a system of tutoring in groups, then there should be individual solutions found. These students are of course more expensive for the Dutch OU, so that these cases should be restricted.

The situation is different if the number of students for a course is small. Groups can be too small and tutoring for that reason too expensive. Different forms of tutoring are required, for instance:

* tutoring at a distance, where there could be a combination of assignment marking, contact by telephone, and contact through telecommunications;
* tutoring at a distance, where there could be a combination of individual contact (eg, to evaluate practicals) and tutoring by video;
* tutoring supported by a tutor, in combination with nationally organised workshops.

In addition to the kinds of tutoring noted above, other activities can be organised, eg supporting the formation of student groups where the tutor only incidentally guides the group's progress. Here again, we cannot expect the costs to be lower.

3.4 The implementation of tutoring

At the start of a new course the department develops a number of activities in order to implement a tutorial strategy. Before starting we make a tutoring scheme, and in that scheme the following items are mentioned:

* introduction to the contents of the course and practical work;
* the nature of the examination;
* the use of software;
* tutor activities; planning for the course, the timetable, and didactic issues relating to the subject.
* the recruitment of tutors; the department has to recruit specialists for the most part in the fields of informatics and information technology. As Department Staff Tutors cannot be specialists for every course we have to hire non-resident specialists for about one year to do the tutoring. The Department Staff Tutors follow these courses as students and after a year they are usually able to take over the tutoring;
* a conference for tutors; at the start of every course the department organises one or more conference days to discuss the tutor scheme and the contents of the course.

3.5 Presentation issues and the evaluation of tutoring

The Department of Engineering started the presentation of SADP's in 1988. The plan is to evaluate the SADP Foundation in Informatics in 1989 and 1990. Special attention is being given to tutoring being offered more regularly to students. We expect to have better results with students who continue to study. We plan to hold evaluation conferences with the tutors of every course in order to adjust the content of the courses and the tutoring schemes.

Conclusion

Developing tutoring is a continuing process. The results will depend on the kinds of students, the tutors, finance, technical means available, practical work etc. However in the future we expect that students will appreciate the offering of regular and integrated tutoring.

INTERACTION AND INDEPENDENCE:

HOW IS THE MIXTURE CHANGING?

by

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INTERACTION AND INDEPENDENCE:
HOW IS THE MIXTURE CHANGING?

by

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Introduction

The highest compliment that the academic community can pay to authors is to hold a conference on the impact of the concepts they have advanced. I am touched that the paper I published with Clement Marquis in 1979, Interaction and Independence: getting the mixture right,1) has been chosen for such treatment a decade later. It is especially pleasing that the conference should be organized jointly by the Open University (OU) and the International Council for Distance Education (ICDE), two organizations for which I have both respect and affection.

It gives me satisfaction to observe the links that have been forged between the ICDE and the OU since 1979. In 1979 the OU celebrated its tenth anniversary with a memorable conference in Birmingham on the Education of Adults at a Distance2). At that meeting some participants proposed the creation of a new association to promote international collaboration in distance education but "there was a widely and strongly expressed view that a new international body should not be set up" (p. 184). Other participants who were already active within the International Council for Correspondence Education (ICCE) suggested that organization might play a stronger role. The record of the discussion reads as follows:

> "An international body already exists that is dedicated to distance learning - the International Council for Correspondence Education (ICCE). It is a body that is formally recognized by UNESCO. At present it comprises a network of correspondence education institutions and organizations, commercial and non-commercial, representatives of which meet together in conference every four years. It has no full-time secretariat nor does it have a headquarters or offices. The suggestion was made that if re-formed and revitalized, moving from correspondence education to distance learning generally, ICCE could form the nucleus around which an organization, promoting and facilitating international collaboration in the field of distance learning, could grow. This suggestion did not, however, appear to attract a great deal of support" (p. 185).

Despite the scepticism implicit in this account a number of ICCE members led by Bakhshish Singh, Kevin Smith, David Sewart and myself decided to take up the challenge. A first step was to broaden the membership of ICCE and the scope of its interests in order that its activities might reflect more faithfully the modern world of distance education.

In all these respects the 1982 World Conference in Vancouver was a turning point, for ICCE emerged from that very successful event with a much enlarged membership, money in the bank, moral support from major institutions such as the Open University, and a new name, the International Council for Distance Education. Since that time progress has been steady, thanks in large measure to the work of ICDE's current president, David Sewart. In 1982 Dr. Sewart took over the ICCE Newsletter and transformed it, with the help of his OU colleagues in Manchester, into the ICDE Bulletin which is now the most important global communication medium in distance education. More recently, as programme chair for the 1988 World Conference, Dr. Sewart was instrumental in bringing to a happy conclusion the discussions with the Norwegian government that have given ICDE a permanent secretariat in Oslo. From this base, and with the generous financial support of Norway, ICDE is poised to play a more extensive and proactive role in facilitating international collaboration.

I have given this summary of the manner in which the old ICCE rose to the challenge put to it at the OU's tenth anniversary conference not just because the ICDE and the OU are joint sponsors of this event, nor simply because this development took place over the decade you are reviewing, but because I see the evolution of ICDE as an important example of how the mixture of interaction and independence in distance education has changed. Here, of course I use the two words in their general political sense.

In this short paper I shall comment briefly on the changing balance between interaction and independence (using the words in a variety of ways) examining the world of distance education from several angles. First, what can we say about the relationship of distance education to education as a whole? Second, is there now more interaction between countries to promote distance education? Third, what is the appropriate mixture of independence and interaction in education in developing countries? Fourth, should changes in the media available to distance education lead us to reassess the concept of interaction in learning? My remarks will be practical rather than theoretical, in keeping with the style of the 1979 paper. Clément Marquis and I wrote that article mainly in order to impose on ourselves the discipline of reviewing what had been written about counselling and tutoring in distance education. The purpose was to guide decisions about how the Télé-université's instructional system should evolve. I was surprised when the paper was hailed as a contribution to the theory of distance learning - surprised and slightly alarmed, because I deprecated attempts to give the study of distance education all the academic trappings of a new discipline. From this perspective I find recent developments reassuring.

Distance education within education: Independence or integration?

The community of people earning their living by providing distance education has grown rapidly in the last fifteen years. Naturally this community has sought to strengthen both its own identity and the status of its professional contribution by promoting the distinctiveness of its field of endeavour. In this it has been strikingly successful. As a result distance education, a term that was unknown outside the institutions themselves ten years ago, now trips easily off the tongues of government ministers and international bankers when they talk about national development. But distinctiveness should not mean separateness. Sewart (1982)3) reminded us that all educational approaches lie somewhere on a scale between continuous face-to-face interaction between one teacher and one student (in which the teacher is the sole source of knowledge) and the independent student learning solely from materials. Perhaps the most salient trend of the 1980s is the mixing of distance education and classroom teaching in various ways. A World Bank study$^{4)}$, for example, has distinguished three degrees of blending: the use of distance education technology in classrooms to replace teachers (e.g. China's TV universities); the use of distance education to augment teachers' efforts in classrooms (e.g. Malaysia, Thailand); and complete separation of approaches, i.e. 'unaided' teachers in the classrooms, 'unaided' distance education outside the classroom (e.g. Lesotho). In the industrialized countries the increased availability of teleconferencing systems has led to some blending between the home-study and extended-classroom forms of distance education. This is especially interesting since the two forms make very different demands on the instructors.

I conclude that the arrival of many conventional institutions in the distance education arena has done much to blur the sharp distinction between interactive and independent activities that we identified in looking at single-mode distance education institutions in the 1970s. Indeed, the term 'conventional institution' is now of limited use in distinguishing between classroom and distance methods, for such institutions are contributing to the spread of distance education through an array of joint ventures, consortia and franchising arrangements such as the Open College and the Open Poly in the U.K. In this context the established distance education institutions may feel threatened. The Open University, for example, observes increasing competition and feels it must "make easier the task of enquirers, potential applicants and students beginning study" to match the flexibility of the rival providers of distance education5). While evolution and adaptation is necessary I do not think that open universities should be too alarmed by the flexibility of their rivals. The flexibility that a conventional institution can bring to its first ventures into distance education is accompanied by considerable fragility. The distance education institution that updates its established systems in a determined manner to meet the evolving needs of its customers should continue to hold the advantage. But the notion of customer is important. In a competitive environment institutions must listen to the individual consumers. The general social goal of improving access and reducing inequities within the collectivity is no longer enough.

Progress in International Interaction

At the OU's CEAD conference in 1979 much was said about the desirability of international course trading, but there were few examples of the phenomenon, even at the national level6). A decade has seen dramatic change. The International Universities Consortium is now moving courses across the Canada-U.S. border, the Hong Kong Open Learning Institute is based entirely on imported courses, and The Commonwealth of

Learning promises successful multilateral cooperation in distance education. It is interesting to note how this Commonwealth project evolved in the directions of greater interaction (i.e. a more multilateral structure) and of stronger emphasis on helping local institutions between the first proposal for a University of the Commonwealth for Cooperation in Distance Education7) and the plan for The Commonwealth of Learning8) which governments agreed to implement. This fledgling organization will provide the most thorough test yet of the hypothesis that distance education in developing countries can be facilitated by international interaction aimed at institutional development, materials sharing, and joint programming.

Education for Development: the case for more independent learning

An important change in the demographics of distance education has occurred in the 1980s. Distance education is no longer mainly a convenience for part-time adult students in affluent industrialized countries. Most distance education students are now young people in the 18-24 age bracket, many of them studying full time. This is because China, Thailand, Korea and more recently India and Indonesia have joined the Soviet Union in making distance education an integral part of the postsecondary system for school leavers. New universities such as the Central China TV University, Sukhothai Thammathirat Open University in Thailand and the Indira Gandhi National Open University are clearly the wave of the future for developing countries. A hard-hitting World Bank Policy Study, Education in Sub-Saharan Africa[9)], urges that in any expansion at the postprimary level "countries will need to consider alternative ways of delivering educational services that shift more of the burden for learning onto the students themselves. Now is the time to begin planning such programmes and developing the correspondence materials, radio programmes, examination systems, and other support that will be needed" (p. 3). The study is not tender towards Africa's universities which, if interactive education means generous staffing, represent interaction run riot and the costs that go with it. It cites a university with 52,000 staff for 77,000 students and others where staff outnumber students. Distance education on the Asian model would be much more appropriate to the circumstances, although the report insists that on Africa's list of priorities any form of postsecondary expansion comes a long way behind providing more books and supplies at the primary level and expanding distance education at the secondary level.

Are new media making interaction easier to achieve?

Our 1979 article and a later essay[10)] noted that a detailed analysis of the concept of interaction in learning leads into deep epistemological and psychological waters. Marquis and I simply defined interaction as two-way contact with another person. In a later article, however, I suggested that this definition is too restrictive because, with proper design, instruction through newer technologies such as audio/video cassettes and microcomputers can recreate many of the beneficial effects of 'real' interaction[12]. As Anderson[12] says, "perhaps the ultimate questions relating to interaction will never be fully answered. However the question 'did this course serve student needs and attain its educational objectives' must be answered in the affirmative for every course".

Equally important to answer, for the developing countries at least, are the questions "is this course as cost-effective as possible" and "is this course a priority for our scarce educational funds". As new technology gives a more interactive flavour to independent learning it may at least be easier to answer the questions about educational efficacy and cost-effectiveness in the affirmative.

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Research supervision at a distance

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Introduction

Most distance courses are teacher centred with closely prescribed curricula; courses concerned wholly or in part with research training, on the other hand, require a student centred approach. Recently the Open University has provided opportunities for student centred learning within its courses through project work (Morgan 1976[1], 1985[2]) and other means (Taylor 1986[3]), but this was done so as to achieve student autonomy (Elton 1988[4]) and not explicitly to provide research training. Also, the OU provides the individual interaction between teacher and learner, which is so important in project work, mainly face-to-face (Morgan 1985[2]). This paper is concerned with the extent to which this interaction, and more generally research supervision up to PhD, can be provided at a distance.

Experience at Surrey

The experience to be described concerns the Postgraduate Diploma and the MSc in the Practice of Higher Education and the research training programme for PhD in the Department of Educational Studies at the University of Surrey. The first of these was evaluated some years ago (Elton et al 1986[5]), but this evaluation was concerned largely with the taught course component. By now a substantial number have completed the Diploma, and a few the MSc and PhD at a distance; we report preliminary results of an evaluation of the Diploma project work by one of us (MW) and lessons learned more impressionistically by the other (LE) from research supervision at the MSc and PhD levels. Our experience is confined to one research specialism, teaching and learning, and also not all the Diploma projects could be classified strictly as research. A number were developmental.

The research topic is always proposed by the student and then negotiated with the supervisor who has been chosen as the most suitable one for that topic. In contrast with much other experience, most students had no difficulty in finding an appropriate project topic, arising out of their own concerns. The cognitive part of the research training is provided wholly at the first two levels and largely at the third through distance teaching modules. The first of these, "Advice before starting a Project", is sent to Diploma students early in their course. It is purely informative and gives regulations, advice and sample abstracts of earlier projects. Students are also sent two self-instructional modules on "Making use of research into teaching and learning" and "Doing research in teaching and learning". For the Diploma project, they read certain marked passages in these modules, but do not study them in full or complete the assignments; students who proceed from the Diploma to the MSc complete the assignments. These are respectively a literature search and review and a research design, both concerning the dissertation topic. At PhD level, which students normally enter directly and not via MSc, they do not usually receive the first module, but they complete the second and third modules and also attend the face-to-face research training course on campus for between three and six months. This is usually the only substantial time that such students spend on campus. Thus students can obtain the Diploma and the MSc wholly at a distance and the PhD with only minimal campus attendance.

The research supervision at all three levels is carried out by correspondence and occasionally by tape (Kaikumba and Cryer 1987[6]) between the students and their Surrey supervisors, who are permanent University staff and active researchers in the

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students' research areas. This approach differs substantially from that of the OU (Morgan 1985):

> "Project components within courses . . . require some shift of resources to enhancing regional academic support. Less central support may be required as the details of what has to be learnt are not set out as in the conventional unit. . . . The role of the part-time tutor is modified. He or she is less of an expert . . . and more of a facilitator. . . . Non-assessed tutor-marked assignments as project proposals, face-to-face tuition specially geared to the project, resources for telephone tuition, time set aside at summer school can all contribute."

The students are practising teachers in higher education and very different from the average OU student. How far the Surrey methods are suitable for different student groups needs further exploration.

Evaluation of the Diploma project supervision (MW)

The evaluation, by means of questionnaire and interview, concerned 32 students, many from overseas, who had totally or nearly completed their projects. They could be divided into four groups, according to their perceptions:

		Supervisor's importance	
		small	great
Would have liked more help	no	A (3)	C (11)
	yes	B (5)	D (13)

Open responses showed that in general supervisors were thought important, when the total project experience was good, and the main reservations of those in D were that comments were too brief and that not enough specific reading material was provided. Of the three in A, two were in the same institution and helped each other, but the third - although one of four on the course in his institution - preferred to work on his own! Finally, some in B found difficulty in organising their work, but some also had their confidence sapped by "caustic" comments.

All supervisors were interviewed individually. Their role perceptions were similar and all considered the provision of research training very important and more so than the student's development. Their actual practices, however, differed in detail, largely because they had not shared their experiences with each other, an omission which they regretted and ascribed to time pressures. All recognised the need for helping students at particular stages, such as the proposal stage, but they differed in their tolerance of students' ability to express themselves and the help that it was incumbent on them to provide. None had had specific training for their role and they tended to refer to their own experience with PhD supervision. This may have caused the upward drift in project difficulty, noticeable over the years, and the overwhelming complaint from the students that the work load was excessive. All supervisors felt that the project was very demanding and that constant correspondence contact with students was crucial. However, in the spirit of project work, such contact had to be initiated by the student, who often failed to do so in spite of this point having been stressed in all the general advice and in repeated individual tutor comments. All students acknowledged that the course administrator, Mrs Elizabeth Oliver, who was also the personal tutor for all the students, assiduously maintained contact with them.

Students and supervisors agreed on the central role of the negotiation of the project proposal, but there were considerable differences in the detail and clarity between different proposals and in the understanding between supervisors as to what was adequate. Undoubtedly, many later difficulties and delays stem from inadequately clarified proposals. In a few cases, difficulties arose because the institutional requirements of a student conflicted with the course requirements, but these were not insurmountable. The guidance provided by the module "Advice before starting a project" was found helpful by 80% of the students. Those who were not satisfied, in the main wanted more guidance on the standard expected. The course team resisted this, as leading to a uniformity which conflicted with the spirit of student-centredness, and preferred to allow the appropriate standard to emerge from the subsequent correspondence interaction.

Students saw the most important advantages of research training at a distance as providing an opportunity for independent and self-directed work; being able to choose a topic relevant to personal and institutional needs; being able to use local resources. Disadvantages were lack of immediate contact with supervisors at 'crisis' times; delay in correspondence, particularly for students overseas; in a few cases communication difficulties. Only one student mentioned lack of local resource and reference materials - a tribute to the materials provided as part of the course as a whole. Important factors in helping with the project were: library materials (87%), supervisor contact (82%), contact with colleagues (82%), course modules (78%), institutional support(57%), family support (57%).

Finally, what were the outcomes? All those interviewed were enthusiastic, as is indicated by the following comment:

> ". . . there was some really innovative work in the project and this was a way of showing that the course material comes into practice. A very good spin-off was that one would do something in a project that one wouldn't do in a course. So here I had a very realistic goal and produced something that was useful for the institution."

The questionnaire yielded the following responses:

	Importance		
	very	average	none
Got into the subject deeply	14	13	2
Discovered ways to relate theory to my teaching	11	11	1
Gained knowledge for real problems in my work	14	12	2
Extended my intellectual skills	10	14	4
Gained insight into difficulties of research	9	12	6
Stimulated what I think will be an enduring interest	7	8	10
Gained insight into myself	6	10	9
Gained insight into others	7	7	8
Had a sense of achievement	11	15	3
Increased self confidence	10	10	7
Improved my problem solving abilities	7	11	6

Impressions of dissertation and thesis supervision (LE)

My impressions at the higher levels are based on three current supervisions, an MSc student in Oman and PhD students in Nepal and Thailand; the first two native English speakers, the third Thai. The first is taking considerably longer than would be normal, mainly for personal reasons, and it is my guess that if he had been time-restricted as face-to-face students are, he might have dropped out. Quite exceptionally, he spent his first year on campus, as his research material was there. The other two are likely to complete in the minimum allowed time, ie four years. The student from Nepal spent his first nine months on campus, but has since been seen only on a day or two each year when he is on home leave; the Thai student spent three months on campus in her first and six weeks in her second year. Neither is expected to come again before taking their oral examinations.

The initial negotiation of the research topic was similar to that at the project stage, and the subsequent interaction with the MSc student has not been very different from what had been my experience at the project level, while the interaction with the two PhD students has naturally been much deeper and more intense. Both seem to find the interaction turn round time not excessive and they make good progress between interactions. On the other hand, the PhD supervision has differed greatly from my experience with on-campus PhD students. Firstly, all the interactions are fully documented, and I can build on what went before in a quite different way from what can be done when interactions are mainly oral. Secondly, both students are able to engage in a form of action research in association with their on-going work in their institutions which would be difficult, if not impossible, if they were less than fully immersed in it. The only serious problem that I have had has been when I have been uncertain of the English of the Thai student. With foreign students on campus, an oral discussion usually clears up the difficulty. Instead what I have done at times is to suggest several meanings for an obscure passage and react to each in turn. The student can then hopefully pick out the appropriate one. More recently I have asked her, now that she is close to completion, to have her English corrected by a native speaker and this has helped greatly.

Conclusion.

The evidence presented indicates that research training and supervision at a distance is possible; it need not be inferior to that provided face-to-face; and there are actual advantages in it. Also, none of the foreign students involved could have attended in any other way and even the British ones would have found part-time attendance difficult and possibly less satisfactory. How far the experience at Surrey might extrapolate to other student categories and other subject areas we do not know.

Acknowledgement

Our thanks are due to Elizabeth Oliver for much help.

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THE KEY TO SUCCESS IN DISTANCE EDUCATION: INTENSIVE TUTORING, GROUP SUPPORT OR PREVIOUS EDUCATION.

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INTRODUCTION

Distance education at the university level in Israel has gradually come of age. The Open University of Israel (OUI) is presently turning out over 200 graduates per year, a large proportion of whom continue to pursue advanced degrees at conventional universities. At this point when OUI has come to be accepted as a permanent feature on the academic scene in Israel, a number of internal educational policy issues have come up for discussion and re-assesment.

One such issue is: How open is open? That is to say, does the open admissions policy, which is a central part of the OUI credo, necessarily imply that no demands or limitations should be made on the students concerning choice of courses, sequence of courses or the need to seek advice from an academic cousellor? The "purists" feel that though maximum assistance and guidance should be available to the students, they should be allowed to make their own decisions and as adults carry the responsibility for possible errors. The "pragmatists" hold that more stringent requirements help the students achieve their final goal, the B.A. degree, faster and more efficiently.

A second but connected issue is, how much assistance and tutoring should a student at an open, distance learning university receive?

Again, the "purists" feel that distance education should be just that: students should receive the specially designed study material and work with it largely on their own, indeed making every home a mini-campus (Halpern, 1984). The tutorials offered once a month are optional, and students may choose never to attend them, handing in their written assignments by mail and receiving the graded papers with the tutor's written comments by return mail. In such a set-up the distance learner is conceived of as an independent, adult learner who chose to study at OUI mainly because it is a distance teaching institution.

However, social reality has been stronger than this purist educational philosophy. There is a growing number of students for whom the main attraction of OUI is its open admission policy. And such students usually require more intensive tutoring. Over the last few years several special programmes have been developed, usually for pre-defined segments of the population, in which a group of students choose a predesigned package of courses leading to a B.A. degree and receive intensive tutoring once a week. These groups are usually organized by community colleges, factories, banks or army units. A preliminary evaluation of such special study groups, for community leaders from socially disadvantaged areas and for labour union activists (Enoch, 1987; Guri-Rozenblit, 1989), showed these study groups to be quite successful. Despite the fact that the students in these two programmes on an average had less pre-academic education than the "regular" OUI students, their sucess rate in the academic courses was slightly higher than that of the regular students.

Inspired by the results of the initial evaluation as well as by impressionistic evidence accumulated at the OUI, it was decided in 1986 to make intensive tutoring available in a few introductory courses, also to individual students. This option was offered in one study center only, on an experimental basis. The questions which merit attention in this connection are: do students who register individually in intensively tutored groups have higher success rates than "regular" individual students? and how do they compare with the students in the pre-organized groups, who study within their group for their entire degree programme? If it is found that both the pre-organized groups' students and the intensively tutored, individually registered students achieve better academic results than regular OUI students, we may then ask the question, is the significant factor enhancing academic success the intensive tutoring per se, or rather the group cohesion or group support (Hare, 1976) which is by-product of it? A second question which merits consideration in this connection is, to which extent is academic success at OUI, like at the conventional universities in Israel (Shapira and Etzioni-Halevy, 1973) associated with previous educational attainment? Finally, is academic success at OUI associated with such socio-demographic characteristics as age, gender or ethnicity?

The present paper will address these questions by a multivariate analysis, comparing students enrolled in three different types of study groups at the OUI:

1.regular groups meeting once a month.

2.intensively tutored groups (meeting once a week) for students registered individually .

3.groups within organizational frameworks, where students take a number of courses, often an entire B.A. programme, together and receive intensive tutoring once a week.

All the students (412) included in the present study were enrolled in two introductory courses in the social sciences: micro-economics and social psychology. Both of these courses attract large numbers of OUI students and both are considered to be rather difficult, having an overall success rate of 40% of students registered in the course.

METHODS

Sample and Data

The present analysis employs data collected from the sudent files at OUI. The demographic data stem from the questionnaire which each student fills in when registering for his/her first course. The sample consisted of students who were registered for courses in social psychology or micro-economics during the academic year 1986-87. A group sampling method was employed, assigning three randomly chosen study groups from each category (regular group, individual intensively tutored groups and "organized" groups) to the sample. Thus 412 students were included in the study. Usable records were available for the entire sample.

Population and Variables

The three categories of students included in the study differ on a number of socio-demographic characteristics, such as age, sex, ethnicity and previous education:

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insert table 1 here

As may be seen from the table, women are slightly over-represented in the intensively tutored groups (cfr. von Prummer et al., 1988); furthermore, a relatively larger percentage of the students who chose intensive tutoring have less than high school education, whereas a relatively large proportion of the students in the pre-organized groups have some post-secondary, often technical education.

The main dependent variable under consideration in the present study is "academic success". However, academic success at an open learning institution is not a simply defined entity. It may be defined as passing (rather than failing) a single course, as continuing at the university and accumulating further creditpoints (rather than dropping out) and finally, it may be defined simply by the course grade or grades received by the student. In view of this, three seperate regression analyses were carried out, one for each of the following dependent variables: course outcome (passed/failed), course grade (the grade received in the psychology or economics course dealt with in the present study) and continuation at OUI (registering for further courses). The independent variables, which were identical for the three regression analyses were: age, determined by year of birth as listed in the student's registration form; sex; ethnicity (students who were born, or whose parents were born in Asia or North Africa; students of European or North American origin; students who are second generation Israelis); previous education (level of formal education prior to studies at OUI); seniority (whether the course in which the student is currently enrolled is his/her first one); type of study group (regular groups; intensively tutored groups for individually registered students; groups within an organizational framework).

RESULTS

The one single characteristic which contributed most significantly to the prediction of academic success (by either of the above definitions) was whether the student was a veteran or a novice at OUI. Students who had accumulated academic credits previous to taking the present course stood a better chance of passing, achieving a high grade and continuing their studies than students for whom this was their first course. This factor alone accounted for between 5% and 12% of the explained variance of the dependent variables.

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insert table 2 here

In second place, we find that the type of study framework in which the student is enrolled contributes significantly to the prediction of whether he/she will pass or fail the course, and whether or not the student will continue studying at OUI. Type of student adds around 2% to the explained variance of course outcome and 5% to the R^2 of continuation. However, and this is a point worth stressing, the type of study group does not exert any significant influence on course grade. Finally, previous educational attainment plays only a minor part in predicting academic success at OUI: it exerts a statistically significant influence on course grade, but does not have any influence on either course outcome or continuation.

DISCUSSION

Do the results reported so far enable us to decide in favour of one or the other of the general educational phiosophies discussed above. Is the purist or the pragmatist model better suited for the adult distance learner? Can we draw any conclusions and formulate any recommendations for the design of distance education in the future?

It appears that intensive tutoring, whether in organizational frameworks or for individual students, is beneficial. Second only to previous OUI experience, the study framework in which a student participates has the strongest influence on his/her chances to persevere at OUI. Individual students in intensively tutored groups do better than 'regular' students, and students enrolled in special programmes within existing organizational frameworks have an even better chance of success, even when socio-demographic and educational background are statistically controlled. However, excelling at the OUI, that is receiving high grades, is more closely associated with pre-university educational attainment than with type of study group attended.

As we have demonstrated that intensive tutoring contributes to academic success, we may now return to the second question raised in the introduction: which characteristic of the "intensive tutoring" causes this effect - is it the tutoring per se or the fact that the students in the intensively tutored frameworks function as a cohesive group, providing moral support for each other and thus preventing failure and drop-out? The answer, based on the present analysis, is : both. More tutoring makes for better results.Students in both the intensively tutoured frameworks achieved better results on all three indicators of academic success than the "regular" students. However, the fact that differences still remain between the "organizational" groups and the individually registered groups seems to indicate the additional effect of group cohesion and support.

Intensive tutoring, whether to individually registered students or to those studying within a pre-organized framework, appears to be an effective way to induct new students into the OUI study regime. In the discussion between the purists and the pragmatists it seems that the latter should prevail. Some students who would not be able to cope with distance learning materials as completely independent learners, seem to be able to complete even quite difficult courses, when given extra tutoring. Since the OUI sees its raison d'etre as twofold, both as a distance learning institution and as an open learning institution providing a 'second chance' to students who cannot apply to conventional universities - there is no reason to exclude such students. As OUI has come of age (it has just celebrated its bar-mitsvah) it should feel confident enough to develop flexible teaching designs: pure distance teaching along with intensively tutored groups; groups initiated by the university as well as study groups organized by and for special segments of the population etc. Such flexibility will throw the doors of the OUI wide open, yet by contributing to a decreae in drop-out and failure rates, prevent them from becoming revolving doors.

In conclusion, there is no one right proportion between independence and support. As distance educators we should acknowledge that each student or each group of students may need a different mixture. An educational institution's ability to provide for all these different needs is a true indication of its maturity and strength.

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Table 1: Background characteristics of students in different tutorial groups

Tutorial group Characteristic	regular	intensive individual	intensive pre-organized
sex			
female	47%	54%	57%
male	53%	46%	43%
ethnicity			
Asia/Africa	28%	31%	31%
Europe/America	52%	61%	40%
Israel	20%	9%	28%
age			
24 or younger	30%	20%	4%
25-34	24%	27%	54%
35 or older	36%	50%	42%
previous education			
less than high school	40%	50%	39%
high school diploma	42%	34%	38%
post-secondary	11%	14%	21%
academic	7%	3%	2%
N (100%)	179	164	69

Table 2: Determinants of Academic Success (Standardized Regression Coefficients)

	Dependent Variables		
Independent Variables	Course Outcome	Course Grade	Continuation
Age	.068	-.000	.153*
Sex	-.026	-.033	.060
Ethnicity	-.000	.018	.036
Seniority at OUI	.218**	.251**	.335**
Previous education	.093	.127*	.030
Type of study group	.114*	.074	.196**
R^2	.078	.194	.078

* p< .01

** p< .001

ARE WE CLOSING THE DISTANCE IN DISTANCE EDUCATION?

Patterns of Interaction with Students
at the Open University of Israel

Margalit Ganor

INTRODUCTION

In a well constructed distance education system there is, theoretically, no need for face-to face contact between teacher and student. Moore (1983) describes distance education as "a family of instructional methods in which teaching behaviors are executed apart from the learning behaviors". Traditional contact teaching would be placed on the "least" end of a Moore's least/most distant teaching continuum and pure distance education on the "most" end.

One of the reasons frequently given by adult students for chosing distance education is that it makes it enables them to acquire an academic education without having to quit or change their jobs or their places of residence (Ganor, 1985; Holmberg, 1985a). Nevertheless, despite this and other attractions of distance education, there are students who find it difficult to cope with the" aloneness" of distance learning.

Distance education literature describes various means of support, differing in regard to the giver (tutor, course team, etc.), the means (oral, written, PC), and area (cognitive, affective), most of which is given with no face-to-face interaction. Holmberg (1985a; 1985b), for example, suggests such a model based on "two way communication".

The need for support is particularly true for students of the Open University of Israel (O.U.I.) in view of its open admission policy: such formal demands as high school matriculation or psychometric tests for admission are not required. The O.U.I. student population is thus very heterogeneous: some students have not studied for a long time; others have no experience at all in university level studies. One of the resusits is the difficulty many of them find in studying on their own.

Whether for lack of former knowledge or because of inadequate study skills, it has become apparent that some means of student support must be provided, and that the O.U.I. has to find a suitable and feasible program for doing so.

This paper will describe some patterns of interaction in student support programs which evolved at the O.U.I. since 1981.[1] They differ from the above mentioned support systems in their main common denominator. In all of them the interaction revolves some kind of face-to-face (contiguous) tutoring: conventional group tutorial meetings, individual counselling, or intensive "organized group" tutorial meetings.

GROUP TUTORIAL MEETINGS

The distance education system established at the O.U.I. assumed from the start that it would not be at the most distant non-dialogue end of the distance education continuum, and would not practice "pure" distance education. The instructional system adopted then had large amounts of both structure and dialogue, comprised of the following components:

1. Written course material: All the course text books are especially designed for self-study, with a "built-in" teaching process. This includes a statement of the objectives of each study unit, a graded guiding through the course material in a dialogue style of writing, questions (for "thinking about" and for answering) and other didactic means. Comprehensive answers to the questions, and sometimes additional explanations, are provided at the end of each unit. For certain courses additional scientific material and teaching aids are included.

2. Assignments: The set of assignments for each unit is redesigned each semester. Students must submit a certain number of home assignments which account for 40% of their final grade. They are marked and commented on by their tutors or by computer, providing feed-back and illuminating problems the learners are encountering.

3. Tutoring and Tutorial meetings. Tutoring is designed to carry out the element of dialogue beyond that which is

pre-structured into the study material. Both student and tutor are active partners in the dialogue. Interaction is designed to supply the live part of student support.

Each tutor is assigned a certain number of students with whom he interacts in writing (marking and correcting assignments), orally (by phone, to individuals), and in tutorial group meetings. Tutorial meetings of two hours take place in the evening about once every three weeks, at an O.U.I. study center near the students' homes. Students are offered 6-8 meetings during an 18-week semester but attendance is not compulsory. Tutorial meetings are officially defined as an opportunity for students to present questions to the tutor, meet fellow students and learn through group discussion. A general syllabus for tutorials is planned by the course coordinator and is sent to each student together with the written course material.

The quality of the tutorials and their effect are constantly monitored and researched, resulting in changes and improvement. Some of the findings of this research will help to understand the role tutorial meetings play at O.U.I.

The main finding, which recurred in most surveys (Ganor, 1981), indicates that most of the "regular" students do not consider the tutorial meetings an integral or important instructional component. In comparison, dialogue through assignment correction is considered vital. This attitude is verified by the limited attendance at tutorial meetings and by explicit statements in questionnaires.

Attendance at tutorial meetings is as low as 40% at the beginning of the semester, and drops to 20% by the end. This results in a vicious circle: little social interaction and dialogue take place at poorly attended tutorials, resulting in minimal enrichment. The focus then unintentionally shifts to the individual needs of those present, resulting in less enrichment, and further dropout.

Further evidence of the role of tutorial meetings with regard to their contribution to dialogue and support was obtained by a correlational analysis of attitudes towards all study components of courses at O.U.I. Students responses ranged, on a scale of 1 - 5 from "Very Positive" to "Very Negative" with regard to the role of each study component in supporting learning. The responses were analysed, a matrix of correlations among items was calculated, and Smallest Space Analysis (SSA)[2] was performed. The order obtained is shown in Figure 1.

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Study material and tutorial meetings are clearly seen to be at opposite ends of the continuum. Most of the students who do attend the tutorial meetings are those who state that the study material is not clear to them. In other words, only when structure is lax do students find a need for face-to-face support in tutorial meetings.

To help regular students, a semi-experimental "individual tutor-counselling" project is now underway. Eighteen experiences and highly recommended tutors were each assigned about 35 students in their own field of expertise, to whom they were available for one-to-one guidance in the more general aspects and problems of university level self-study, that is, not the course content per se. Still in its early stages, the experiment will last through 5-6 semesters. Each tutor-counsellor will accompany "his" students throughout their O.U.I. studies, getting to know each one personally. Unlike our other tutoring programs which provide "in course" support, individual tutor-counselling provides "follow-through continuity" intended to help students to choose their program of studies, acquire study skills, overcome the academic and learning problems they encounter, bolster morale, help untie administrative snags, and so on.

INTENSIVE GROUP TUTORING

Intensive Group Tutoring is the name of a program in which an organized group enrolls in a course, unlike our regular, individual students, mainly with the intention of acquiring an academic degree. Most groups are organized by large institutions or places of work such as banks, the army, the Histadrut (Workers' Federationn) and teacher training colleges.

The courses and academic program are uaually selected by the institution in consultation with the O.U.I., and usually deal with related subjects: banks tend to prefer courses in economics and bookkeeping, teachers chose psychology, while others follow a more general program leading to a B. A. degree.

These organized groups receive an larger number of tutorial meetings than our regular students. They attend them as a group, meeting about once a week in a near-by study center or regional college. As a result, the nature and content of their tutorials differ from those attended by regular students. The content is adapated to the level of each group and their needs, and some deal not only with course content but with imparting and reinforcing study skills such as reading scientific material, writing assignments, organizing study schedules and so on.

In 1982, about six years after the O.U.I. opened, the demand for intensive group tutoring began to increase and has continued to do so since then (see Figure 2).

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In that year, the directors of "Project Renewal" (a venture to rehabilitate socio-economically and culturally deprived neighborhoods) decided to offer local community leaders the opportunity to acquire an academic education in order to improve their self-image and enhance their social status within the community and to enrich their public activities. (The first group is presently completing its B.A. program.) This stepped up the alrealdy growing demand for intensive group tutoring even more. At present, 40% of the student population studies in organized groups (51 organized groups in comparison with only 17 regular ones were registered in Semester 24 in 1989, the last semester for which data on perseverance is available).

In follow-up research regarding the intensive tutoring program some noteworthy characteristics of organized versus regular groups emerged. There is a significant difference in the students goals: 78% of those in organized groups wish to win an academic degree in comparison with only 52% of those in regular groups. In regard to formal education, however, only 53% of the students in organized groups have high school matriculation in comparison to 72% of the regular students. There were no significant differences between regular and organized groups with regard to sex (52% men; 42% women) and geographical location of residence.

Study in organized groups was shown to have both positive and negative effects on study patterns. Students in the organized groups showed greater perserverance and achievement in their studies (see Table 1 and figure 3), perhaps as a result of esprit de corps (Ganor et al. 1985).

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Please put Figure 3 about here

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In order to examine some of the predictors of perserverance, discriminant analysis was performed for all new students in academic courses in Semester 24. The analysis was limited to new students in order to avoid previous experience in distance education, which has already been shown to be the strongest predictor of perserverance.

Two dependent variables were defined: (1) perserverance, defined as fulfilling all course requirements (CR); and (2) course credit (CC) which depends on passing the final exam.

Four independent variables were defined: (1) type of group (organized/regular); (2) high school matriculation; (3) goal of study; (4) age.

The summary of the data for fulfilling course requirements (CR) (see Table 2) indicates that group type, goal of study and matriculation, in that order, are significantly related to it.

The order is somewhat different in the inter-relationship between course credit and predictors (see table 3): the strongest predictor is goal of study, followed by group type, age and matriculation. It should, however, be noted that prediction is in general relatively weak (0.18).

However, it emerged that the intensive group tutoring program also brought about some less positive side-effects. (a) More students in some of the organized groups come to the tutorial meetings unprepared. They tend not to study the course material at home in the hope that the tutor will summarize it for them. (b) There is a "group effect" in the preparation of assignments, some of which are either copied from each other or done "cooperatively". As a result, in some courses a gap between the mean grade for assignments and the mean grade on the final examinations was observed. (c) Students who start as an organized group grow more dependent on it refuse to dissolve this framework until they graduate.

A possible solution for overcoming this growing dependence on contiguous interaction has emerged from an experimental program which the O.U.I is presently carrying out. In this program, intensive group tutoring was constructed and offered to regular new students in five introductory one-semester long courses. In weekly meetings, the basic concepts and ideas of the specific course material are introduced, and skills necessary for university level studies are imparted, especially those related to the specific course. The students who opted for this intensive program had had less formal education than students in regular groups and/or a longer time had elapsed since those studies. Their motivation was very high, they devoted more time and effort to their studies, and perserverence was high, as indicated by the number of assignments submitted and the proportion of students who took the final exam. Students who opted for the regular groups taking the same introductory courses emphasized that they had chosen the O.U.I. for the very reason that "classroom" attendance was not necessary.

CONCLUSIONS

At O.U.I. it became apparent that we were dealing with two distinct types of students: (a) the "regular" students who desired and were able to learn at a distance with non-contiguous support and who studied independently or in our "regular" groups; (b) students for whom this support was insufficient. In this second group, we find students who, while desiring the advantages of distance education (no need to change jobs or place of residence), are afraid or unable to study completely on their own. An increased amount of face-to-face interaction as offered in the intensive tutoring program seems to answer two kinds of needs: (1) immediate feedback and reinforcement, teacher supervision and/or social group comparison, which are provided by the "give and take" classroom situation and group affiliation; (2) reinforcement for coping with the high level of reading ability and cognitive maturity necessary for processing and mastering self-study course material (Moore, 1983).

The organized and intensive group program constitutes a semi-structured academic framework, usually via the student's place of work or a community organization, which reaches out to a stratum of learners who would not study otherwise. The need for this type of program was further reinforced by a survey conducted in the general population about the public image of the Open University of Israel. About half of the respondents indicated interest in academic studies - but not at the O.U.I. 25% answered that this was because of the university's instructional method: they wanted to study, but within a group and not on their own; 34% stated that they would be interested in study at the O.U.I. should there be an organized study group at their place of work.

The data gathered so far indicates unequivocally that more and more students who wish to obtain an academic degree are drawn to study when offered the possibility of doing so in organized groups. As we move away from or "close the distance" and offer more "education", by face-to-face interaction, we provide such students with this possibility. However, in doing so, a very delicate balance has to be maintained between independence and support, between structure and dialogue. We have to consider carefully the amount of interaction that is advisable for this type of student. The main, three-part question that we are faced with is: As we add more interaction, do we support students and lead them to greater independence in the future? Or do we perhaps over-support them and thus habituate them to dependency? And what, then, is the formula for the delicate balance that is needed?

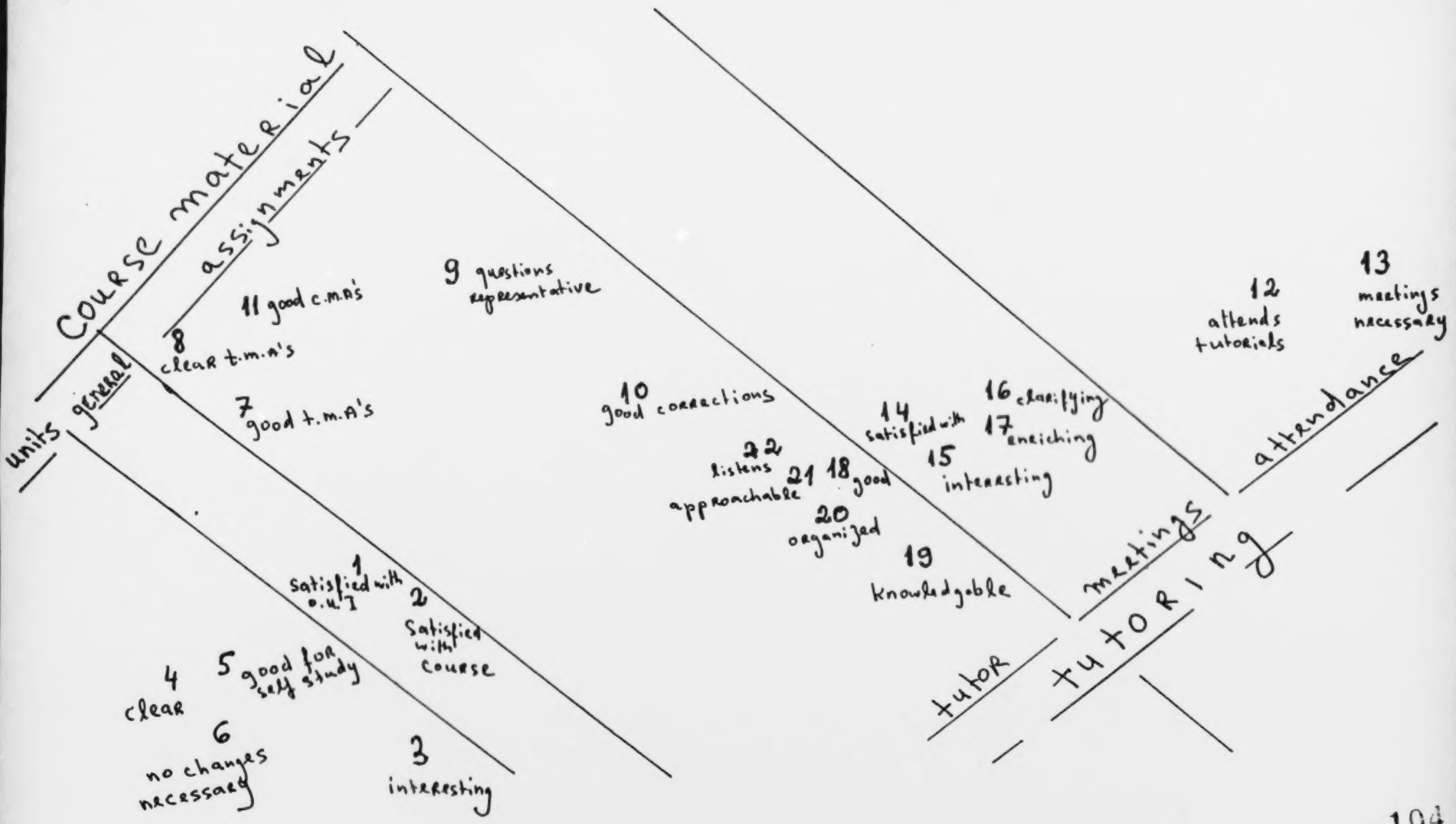
FOOTNOTES

1. Data describes results from various research projects based on different statistical mehtods.
2. SSA-I is one of a nonmetric series developed by Guttman (1968) and Lingoes (1973). It treats each variable as a point in a euclidian space in such a way that, the higher the correlation between two variables, the closer thay are in the space. The space of smallest dimensionality that makes possible such an inverse relationship between the observed correlations and the geometrical distances is used.

FIGURE 1: SSA1 - a two dimensional projection of study components.

FIGURE 2: Enrollment by type of group.

FIGURE 3: Perserverance of enrolled students during successive stages of course study (semester 24).


course material
assignments
units
general
11 good c.m.a's
9 questions representative
8 clear t.m.a's
7 good t.m.a's
10 good corrections
1 satisfied with o.u.I
2 satisfied with course
4 clear
5 good for self study
6 no changes necessary
3 interesting
22 listens
21 approachable
18 good
20 organized
19 knowledgable
14 satisfied with
15 interesting
16 clarifying
17 enriching
12 attends tutorials
13 meetings necessary
attendance
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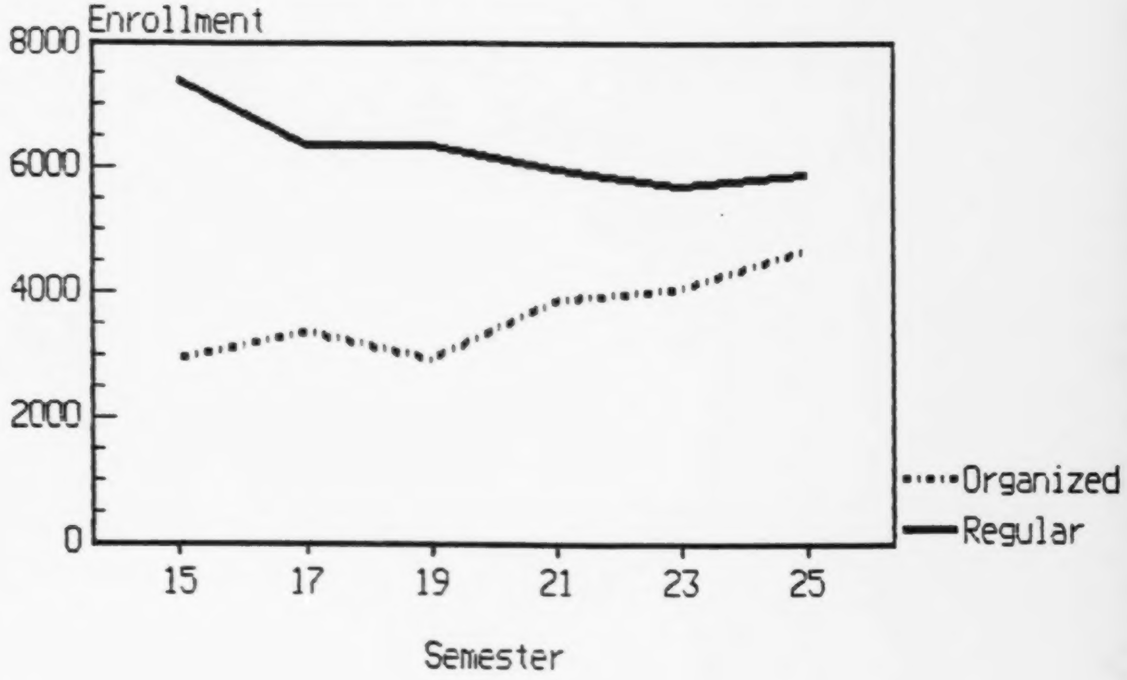
(N = 771 ; C = 0.08)


Enrollment
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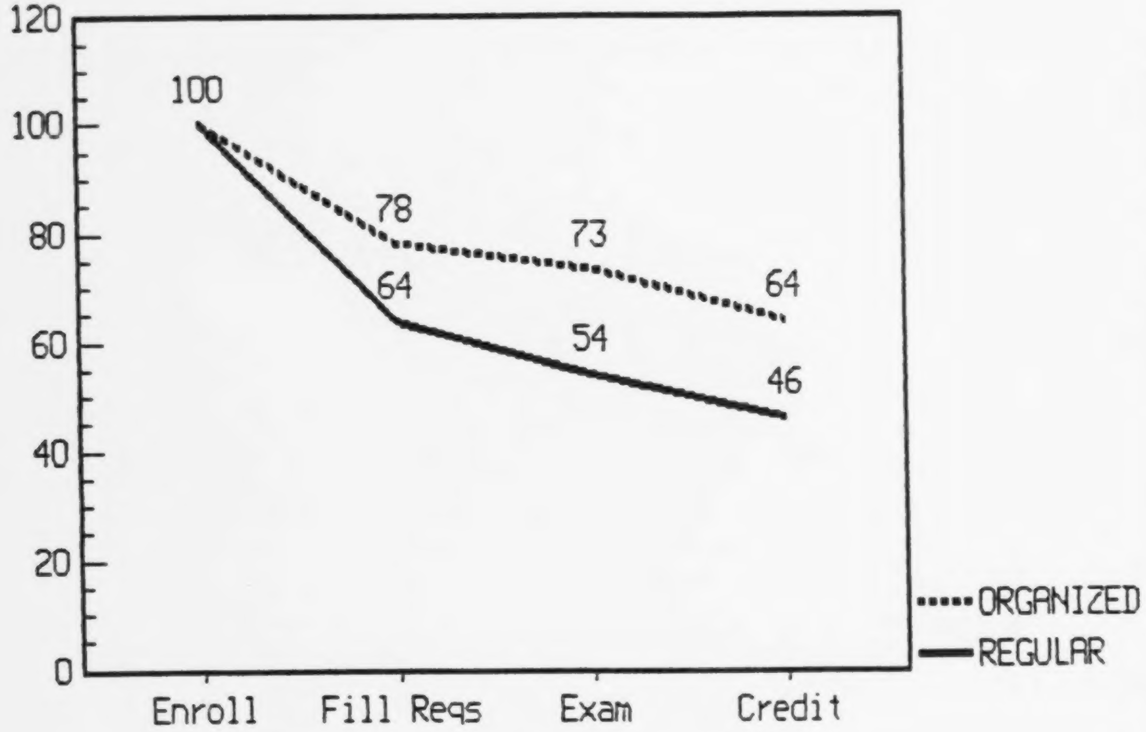
120
100
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0
100
78
73
64
64
54
46
Enroll
Fill Reqs
Exam
Credit
ORGANIZED
REGULAR

TABLE 1: Perserverance of enrolled students during successive stages of course study.

TABLE 2: Discriminant analysis between students who did/didn't fulfill course requirements (CR).

TABLE 3: Discriminant analysis between students who did/didn't receive credit for a course.

APPENDIX

TABLE 1: Perserverance of enrolled students during successive stages of course study.

TYPE GROUP/ STAGE	ENROLLED		FULFILLED REQUIREMENTS		TOOK FINAL EXAM		CREDIT	
	N	%	N	%	N	%	N	%
SEMESTER 17								
REGULAR	6736	100	4289	64	3640	54	3129	46
ORGANIZED	2256	100	1757	78	1645	73	1435	64
SEMESTER 19								
REGULAR	5756	100	3926	68	3147	55	2535	44
ORGANIZED	2519	100	2107	84	1874	74	1543	61
SEMESTER 21								
REGULAR	5698	100	4043	71	3488	61	2955	52
ORGANIZED	3179	100	2673	84	2459	77	2023	64
SEMESTER 23								
REGULAR	5610	100	4048	72	3512	63	3076	55
ORGANIZED	3306	100	2789	84	2638	80	2255	68

TABLE 2: Discriminant analysis between students who did/ didn't fulfill course requirements (CR).

Number of Cases

Fulfilled requirements	1211 Students
Did Not Fulfill requirements	1043 Students
Total	2254 Students

Summary Table

Step	Variables	Vars In	Wilks Lambda	P <
1	Group Type	1	0.97344	0.000
2	Study Goal	2	0.96807	0.000
3	Matriculation	3	0.96714	0.000

Canonical Discriminant Function

Canonical Correlation	Wilks Lambda	Chisquare	DF	P <
0.1813	0.9671	75.201	3	0.000

Standardized Canonical Discriminant Function Coefficients

Group Type	0.84081
Study Goal	0.42694
Matriculation	0.17544

Pooled-within-groups Correlations between Discriminating Variables and Canonical Discriminant Functions

Group Type	0.89605
Study Goal	0.59618
Matriculation	0.04526

TABLE 3: Discriminant analysis between students who did/didn't receive credit for a course (CC).

Number of Cases

Received credit	1434 Students
Did Not receive credit	820 Students
Total	2254 Students

Summary Table

Step	Variables	Vars In	Wilks Lambda	P <
1	Group Type	1	0.97880	0.000
2	Study Goal	2	0.96997	0.000
3	Matriculation	3	0.96928	0.000
4	Age	4	0.96875	0.000

Canonical Discriminant Function

Canonical Correlation	Wilks Lambda	Chisquare	DF	P <
0.1768	0.9688	71.429	4	0.000

Standardized Canonical Discriminant Function Coefficients

Group Type	0.70769
Study Goal	0.56604
Matriculation	0.18167
Age	0.13580

Pooled-within-groups Correlations between Discriminating Variables and Canonical Discriminant Functions

Group Type	0.81937
Study Goal	0.70321
Matriculation	0.03302
Age	0.20686

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INTENSIVE TUTORIALS AND SPECIAL FRAMEWORKS FOR TEACHERS STUDYING AT THE OPEN UNIVERSITY OF ISRAEL

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Paper for the International Conference on - "Interaction and Independence: Student Support in Distance Education and Open Learning", September 19th to 22nd, 1989, at Downing College, Cambridge, Enbgland.

1. Teachers as a Target Population

Teachers constitute a special target population at the Open University of Israel (OUI). Even before it was established, in its initial stage of planning, one of its major goals was defined as upgrading the educational level of teachers. On September 7, 1971, the Rothschild Foundation, which undertook to sponsore the establishment of the new university, appointed an enquiry commission to assess "the feasibility, practicability and economics of an open university for Israel" (Halperin, 1984, p.31). The committee was headed by Wilbur Schramm, then Director of the Institute for Communication Research at Stanford University. Schramm gave highest priority to the inservice training and academic upgrading of the nation's school teachers - a job that the conventional universities were acknowledged to be doing poorly and which carried little prestige in academia. The Schramm Committee had stressed the need for a new approach in working with teachers - emphasis must be placed as much on methods as on the actual subjects of instruction. The Committee recommended that OUI joins in the teacher's training system operated by the Ministry of Education by suggesting new ideas and creating training programs for teachers to study in groups and discuss problems related to their work, and at the same time to foster their self-study and individualized learning skills.

In 1989, over 3,000 teachers are enrolled in different programs and tracks of study at OUI. Obviously, the distance education system opened up a variety of learning opportunities to teachers, spread all over the country, from the peripheries to the center. The underlying assumption is designing special frameworks for teachers was their need to interact with colleagues and get support and assistance in the course of their studies, since in their working places they usually operate as "soloists". In this paper I will examine briefly several study frameworks at OUI, which were designed especially for teachers, and reflect the difficult synthesis of interaction and independence in distance education and open learning systems.

2. The Teacher's Learning Room

The framework of "Teachers' Learning Room" broadens the idea of "any home a campus," in a distance education system, to "any school a campus." It contains the advantages of being able to bring university level studies to the school place with the advantages of providing intensive tutorials and interaction with colleagues at work. Teams of teachers at a given school select a specific course of OUI, which is initially designed and developed as a self-study course. If the teachers wish to get an academic credit for the course, they have to submit the requested assignments and be tested in the final exam as all other regular students of OUI. But during the course of their studies they get intensive tutorials which take place at the school and enable them to discuss the various subjects with colleagues at work, and assist them in implementing relevant subject matter in planning the curriculum for their students.

If teachers do not wish to get an academic credit (either they have already a B.A. degree, or are not interested in getting a degree), then the course material is adapted to the special interests and preferences of the participating teachers, in cooperation with the group's tutor, the course coordinator and a representative of the Teachers Training Department at OUI. Each group comprises usually of 20 teachers.

In 1989, there were over 800 teachers enrolled in the framework of the "Teachers' Learning Room." The most popular subjects which are chosen by teachers include: reading comprehension, curriculum studies and mathematics.

3. Advanced Diploma Studies

OUI was a pioneer in offering advanced diploma studies to teachers and educational administrators, who have already a B.A. degree. At this point, OUI offers diploma studies in two subjects: "Curriculum Development and Evaluation," and "Reading Comprehension and Written Expression." Each diploma is divided into two major parts. The first part is composed of two self-study courses, relevant to the specific subject of the diploma. The first part purports to provide the teachers with a self-study experience, which usually is unfamiliar to most of them. The second part is comprised of ten intensive workshops, five hours each, which elaborate various subjects studied in the first part, and focus on the application of the different skills and materials in each teacher's working place. At the end of the second part teams of teachers (usually 2 to 3 teachers in each team) have to submit a final project, which applies the knowledge acquired during the diploma studies in designing, developing and evaluating a curriculum on a topic which is chosen by the participating teachers.

4. Teaching Certificates in Post-Primary Education

Around 7,000 teachers in Israel in junior-high and high-school teach without having a teaching certificate. These teachers are hired on the basis of special contracts and cannot get tenure till they complete the official requirements of a teaching certificate, as defined by the Ministry of Education. OUI designed a special program for these teachers. The program includes general pedagogical studies and methodology of a specific subject-matter. Most of the courses are based on the habitual distance learning method of OUI, in order to enable teachers from all over the country to enroll. Interestingly, around 60% of the participating teachers in this specific framework come from south and north peripheries. Most of them feel that OUI's program was a real "salvation" for them, because otherwise they would not be able to attend a campus of a traditional university, and at the same time to pursue full-time working. In addition to the self-study assignments, each pedagogical and methodological course includes two long workshops for discussions and elaboration of various topics.

5. B.A. Program for Principals and Vice-Principals in Primary Schools

Representatives of the Ministry of Education approached OUI in June 1985 with a request to tailor a special program to upgrade the academic level of principals and vice-principals in primary education, who do not possess a B.A. degree. The program is based mainly on self-study courses in the areas of educational administration and other social science relevant subjects, but it enables organized groups of 15 to 20 principals to get intensive tutorials in the course of their studies. The final stage of the program includes intensive workshops dedicated to enhancing effective administrative skills, and discussions and symposia days on educational leadership.

6. Teachers on Sabbatical

Teachers in Israel are entitled to go on a sabbatical every seventh year of their work. OUI plays a prominent role in providing unique programs for teachers on sabbatical. According to statistics gathered by the Teachers' Training Fund, which sponsors the studies during the sabbatical, in the years 1987-88 more than 30% of teachers who went on sabbatical in Israel, attended OUI's programs.

Teachers on sabbatical are entitled to enlist in all the range of courses offered by OUI to regular students, and many choose to do so. But there are also special courses designed for teachers on sabbatical and these courses involve intensive tutorials and weekly meetings, in order to provide teachers the grounds for idea exchange, discussion, support and assistance of professionals as well as of colleagues. Such courses are offered in mathematics, English teaching, Arabic teaching, physics, chemistry, biology and reading comprehension. All of the special courses are designed in cooperation with relevant departments and superintendents in the Ministry of Education, and are used as an important vehicle to implement new curricula in various subject-matters.

7. Cooperation with Teachers Training Colleges

OUI's cooperation with teacher training colleges (TTC) constitutes a new venture in Israeli higher education in general and in teacher training area, specifically. In Israel there exists a dichotomy between training teachers for primary and junior-high schools, and for the high-school level. Whereas the elementary and junior-high teachers are trained for three years in special TTC, the prospective high-school teachers get their two-year pre-service preparation within the schools of education of research universities, after having completed their undergraduate studies in disciplinary faculties, such as mathematics, biology, history, literature, etc. The TTC hold their pride in focusing on the methodological and pedagogical skills of the prospective teachers, but they are usually weak in providing a sound base of the substantive structures of the various disciplines.

The cooperation between OUI with TTC (two at this stage) intend to maximize the advantages of academic study at a university with those of a TTC. During their four-year of studies, the students complete all the requirements of the TTC and get an accredited teaching certificate, and at the same time complete their B.A. studies in a specific subject-matter at OUI. This program is still in its piloting phase, and more conclusions as to its effectiveness might be drawn within the next five years.

The students in the TTC study most of OUI's courses independently by themselves, and are augmented by a weekly tutorial to discuss problematic matters, to broaden the scope of the course and to exchange ideas. While studying OUI's courses they get the chance to practice and experience an independent open learning environment, and at the same time can utilize the advantages of a face-to-face classroom.

8. Concluding Remarks

The late Max Rowe who was a key person in establishing OUI, and its second president, stated in his book on "From a School System to a Learning System in Israel" (1985) that: "Every educational system must deal with three fundamental elements: the people, the methods, the plans. At the very top of this list I have placed the teachers, because they are the key to all methods of education" (ibid, p. xv). Unquestionably, OUI responded to this underlying philosophy, in a range of programs and special frameworks, which are directed to raise the educational level of teachers, who constitute a significant portion of its student body. All of the programs which were described in this paper combine elements of independent study and interaction with other students and colleagues in the school place or in other educational settings, and as such might be of interest to the participants in the conference on "Interaction and Independence in Distance Education and Open Learning."

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ROLE SUPPORT IN OFF-CAMPUS STUDENT GROUPS: THE UNIVERSITY REINVENTED?

A paper presented to the Open University Conference
Interaction and Independence September 1989.

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For hundreds of years university students have laid claim to a special status within the wider community. They have been treated either reverently as future scholars and leaders or permissively as either today's revolutionaries or buffoons. The exisistence of a student culture which is a mixture of the received wisdom obtained from their teachers and their own social interaction, is recognised as the milieu within which the student develops or is socialised. The transmission of the officially sanctioned part of the culture is undertaken by academics who are paid for that purpose.The informal culture however, is, at least for the duration of his/her university career, equally important in moving the student through the undergraduate lifespan, from orientation to graduation. This task is a less tangible one which is not rewarded by the presentation of degrees or diplomas but continues in tandem with class attendance and private study.

Distance educators are new on the university stage. They are perhaps less steeped in tradition than many of their colleagues and have tended towards an instrumental approach when considering the requirements which will provide their students with credibility in the intellectual marketplace. Almost all off-campus students are part time and therefore, having other roles were often assumed to have little time for or interest in activities in company with other students. Apart from those who follow Peter's industrial model (Roberts 1984) (1) all distance educators have made some provision for interaction with staff and students when planning their programmes. Few however, have done so with the conscious recognition that a successful student career, which for many distance students can span six to ten years, is enhanced by the provision of opportunities for the development of a student culture. This is a large leap and is a recognition that there is more to a successful student life than reading study guides and writing essays. To most distance students the university is a foreign culture whose ways they learn most imperfectly. Value systems, behavioural norms and customs cannot be effectively conveyed merely through course materials. These are intangibles which individuals learn through interaction or invent in the absence of real information. The debate of independence versus interaction in distance education revolves around the issue of the importance or unimportance of student culture and divides those for whom distance education represents freedom from involvement in extraneous activities from those for whom book learning is only an aspect of education. Daniel and Marquis (1979 :29-30) (2) quote Pask who said that all learning is a conversation. Increasingly the university must ask the question 'A conversation between whom?'

In 1984 a brief working paper presented to a distance education conference at Massey University in New Zealand by David Meacham (3) raised a number of the issues concerning the need of off-campus students to understand the rules of their institution. In many cases this has meant a re-negotiation of those rules in the process of student socialisation. Meacham considered that this was an inevitability and alerted distance educators to the dangers inherent in allowing unintended 'realities' to become entrenched. Five suggestions to maintain the official version of reality conclude his paper. These include the establishment of student support groups which Meacham believes should be run

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1. Introduction

The Certificate in Fashion and Clothing Manufacture was the first course offered by the Hong Kong Polytechnic in 1986 on a distance learning basis. At present, there are over 500 students at different stages of the course. As I have been involved in the development of this course for the past few years, I would like to talk about some of my experience with regard to student support in a distance learning course like this. I believe that the way in which student support is delivered is one of the main ways in which distance learning differs from on-campus courses and is one of the main reasons for the success or failure of courses and individual students. Over the last few years I have tried to analyse problems with the delivery of this support in the Clothing Course with a view to bringing about improvement. It is hoped that this experience may be of benefit to people who may have to a develop distance learning course of a similar kind in the future. In order to give a clear understanding of the nature of this course, I will first of all, introduce the general features of the course.

2. The Course

The aim of this course is to provide a self-study programme at technician level for those who: (i) wish to update their knowledge but are unable to attend a structured part-time programme, (ii) have no previous academic training in the garment field, and (iii) want to obtain a qualification.

The course consists of 18 modules of study materials which are listed below. Each module contains several units of self-learning materials according to topics.

Code	Title	Prerequisite
35982	Introduction to Pattern Construction	-
35983	Pattern Construction - Women's Wear A	35982
35984	Pattern Construction - Women's Wear B	35983
35985	Pattern Construction - Men's Wear A	35982
35986	Pattern Construction - Men's Wear B	35985
35987	Introduction to Garment Manufacture	-
35988	Garment Manufacture - Basic Sewing Technology A	35987
35989	Garment Manufacture - Basic Sewing Technology B	35988
35990	Garment Manufacture - Women's Wear	35989
35991	Garment Manufacture - Men's Wear	35989
35992	Supervisory Studies I	-
35993	Supervisory Studies II	35992
35994	History of Clothing	-
35995	Studies in Practical Garment Design	-
35996	Production, Planning and Organization I	-
35997	Production, Planning and Organization II	35996
35998	Knowledge of Materials I	-
35999	Knowledge of Materials II	35998

without large inputs from the university (pers. comm. 16 May 1989).

In common with many academics in distance education institutions I am concerned with the perennial problem of student retention and it is this interest allied with the social anthropologist's fascination with group interaction which provided the impetus for this work. My research, of which this paper represents a small part of a larger study of off-campus student interaction, aims to examine the phenomenom of student support groups from the perspective of an interactionist ethnographer and investigates the social dynamics within these groups.[1] Relationships with academic staff and the wider university implications will also be canvassed briefly. Several intertwined themes are emerging from the research which was conducted by survey, interview, discussion and participant observation. These include the recognition that off-campus students need to establish an identity within a university culture which they can in part achieve through group interaction. In the process, which involves a degree of student instrumentalism, they create their own version of a university culture which may or may not approximate either the academic culture or the on-campus undergraduate culture. Central to this process is the role of the intermediary, a leader who acts as a broker between the university and the students and controls the version of received reality. There are

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[1] This paper is a result of a study of some 90 Deakin University students in seven groups who consciously or unconsciously have responded to this need by forming themselves into support groups. Additional groups which operate entirely independently of the university are currently being investigated.

A student can enrol on a maximum of 3 modules in each 15 week term. There are two terms per year, starting in September and March. Thus a student can finish the course within 6 terms, i.e. three years. However, for those who want a slower pace, a maximum of 12 terms, i.e. 6 years is allowed.

If a student wishes to study certain modules only, he is allowed to enrol on a module basis.

The mode of study for the course is 'self-study' supported with scheduled tutorial and telephone counselling (telephone calls are free within Hong Kong). Self-learning materials are distributed to students at the induction tutorial session for each term. They are expected to study the materials by themselves. If they encounter any study problems, they can either consult their tutors during the telephone counselling sessions (2 hours each week) or at the tutorial sessions. For each module, there are four tutorial sessions.

Module assessment is based on continuous assessment and sessional examination. Continuous assessment consists of assignments in each module.

Upon completion of the 18 modules and obtaining a pass grade in the overall assessment, a student will be granted a Certificate in Fashion and Clothing Manufacture. Those who enrol on a module basis will be granted a module certification upon completion of the module and obtaining a pass grade in the assessment.

3. Student Support

In my view, student support in a distance learning programme can be grouped into three main areas. They are:

(i) the support incorporated within the self-learning materials,

(ii) the support incorporated within the learning system, and

(iii) the support incorporated in assignment marking.

3.1 Support Incorporated Within the Self-learning Materials

In many self-study materials, besides the main text which gives the desired knowledge to student, learning activities which function to help students in the self-learning process can also be found. The study materials of the clothing course is no exception to this. In the study materials of the clothing course, different activities in the form of in-text questions, self-assessment questions, exercises, discussion topics etc. have been included so as to enhance learning. In my view, these are all forms of student support helping students to achieve the learning objectives. And in relation to this, there are two points which in my experience, can be of considerable importance. They are (i)the quality of the activities and (ii) the quantity of the activities.

Quality of the activities

The kind of activities included within the text greatly affect student attitudes to the learning materials. From the evaluation results of the clothing course, we have found that about 40% of the students attempted all the activities, another 40% of them attempted some and the rest (20%) seldom attempted any activities. From discussions with students aimed at finding out the causes for this I have discovered that one of the main reasons is the quality of the activities. Those students who attempted only some of the activities obvious political processes at work here as the possibility exists for conflicting realities to be presented by official and unofficial channels. The process by which unofficial channels assume legitimacy is a separate but related issue which space does not permit me to address here.

While distance educators are exercising their minds concerning the correct balance which should be struck between independence and interaction, a number of off-campus students at Deakin University in the late 1980s are not waiting to be told what is best for them and what academics are willing to provide. Rather than accepting or rejecting the few initiatives from academics to meet on the university's terms and on university territory, they are forming their own local interactive groups, meeting in homes and halls and inviting academic input where they think it appropriate. Small communities of students are being created consisting of between six and thirty five members. This is a new form of distance education interaction for Deakin and is indicative in part of a new sense of autonomy and self-direction on the part of students.[2] Students are joining these groups in order to learn from one another and in the process transmitting culture and in some cases may be inventing their own reality.

Space does not permit a detailed description of the research findings but a small amount of demographic data is necessary to set the study in context. Over 70 of the 90 students among whom research was carried out see themselves as active members of support groups. Most are women aged over 35 who are not in full time employment, have not studied at tertiary level before and who have not completed secondary education. This is obviously the group of students whose members feel most in need of validation of their role as students, as for them the new role represents a significant shift in life plans. There are enormous forces working against such a student who is in reality attempting to do far more than enrol and pass subjects in a degree course. The student is in fact going through a socialisation process which for some may amount to re-socialisation. One student reported that contact relieved the private hell he went through at the beginning of each semester. Lewis (1981:54) comments on a similer situation among students at the Open University for whom student-student contact was not merely '.. a pleasant social extra but almost a condition of survival'. (4)

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[2] Groups based on Study Centres were common in the first years of Deakin's operations but it appears that they did not exhibit the same degree of personal initiative of contemporary groups.

An interactionist ethnographer trying to understand any social group in any culture will observe and question its members in order to discover the common values they hold, the meanings they attribute to certain activities, which are sometimes known as rituals, and perhaps most importantly, the impelling mythology which maintains group cohesion. For the off-campus student there is a universal belief in self-betterment through study, which drives the successful student and maintains persistence often despite considerable odds. This belief, however is fragile, especially at the commencement of study and self-doubt can be cancerous. For many new students confidence is strengthened if they are in contact with other students who may often be facing

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students to get support from counsellors. However, experience from the Clothing Course has shown that only 20% of the students use service.

From the evaluation discussions I have discovered that there are two main causes for the under use of this telephone counselling service. The first is a low level of awareness about the service. Many students have not used telephone counselling before. They seem to lack understanding of how the service can benefit them.

The second cause is the time schedule of the telephone counselling session. Students may not be free during the assigned telephone counselling sessions. Those willing to use the service would prefer to have more telephone counselling sessions rather than just one.

Thus there are two points that need attention. The first one is the necessity to increase the awareness of students about the telephone counselling service. The second one is the necessity to arrange more telephone counselling sessions, to give more chance for students to contact the tutors.

A solution to the first problem, which I have tried and have proved to be very successful, is for the telephone counsellor to contact the students actively rather than waiting for their phone call. This active approach can increase students awareness of this service. Of course, it will also reduce the gap between teachers and students.

As for the time problem, the obvious solution will be to offer more telephone counselling sessions. Instead of having just one session per week only, we should arrange two or more sessions.

3.3 The Support Incorporated in Assignment Marking

Assignments, besides being a means for assessment, are a very useful means of interacting with students and giving learning support to them. Tutors, through their comments on the assignments, can exercise a strong influence on students' learning attitudes. Again from the evaluation of the Clothing Course, results have indicated that many students would prefer tutors to give detailed comments on the assignment, not just a tick or a cross to indicate right or wrong. In some modules, up to 44% of the students have indicated that tutors comments were insufficient. Such a high percentage is of course not desirable. Obviously, one of the reason behind this is the lack of sufficient knowledge on the proper method of marking distance learning course assignments. Tutors need, therefore, to be made aware that marking distance learning course assignment differs from that of marking on-campus courses. In the distance course assignments, tutors should, if possible, give comments to every answer of the assignment no matter how good or bad the answers are.

4. Conclusion

From the experience of the Clothing Course which I have just described, I believe it is possible to conclude that on the whole there are two areas that require careful consideration regarding student support in a distance learning course. The first one is the necessity of having a clear recognition of the student characteristics. Before setting up a student support system, we should have a clear idea about the students entrance characteristics, their academic level, their general job nature, aims of attending the course and family background. Once we have a clear picture of all those, then we can set up a supporting system to meet their needs. The second one is the necessity of making those responsible for delivering the support aware of their role. Materials producers need to similar problems. In a recent publication on women distance students Carl, Keough and Bourque note the dangers of distance education in reinforcing the 'ghettoization' of women confined to the home (1988:110) (5). This problem has received little attention to date and it is perhaps a rejection of this condition that many students, particularly the women students whom the study has identified, are forming groups to minimise their marginalisation.

All off-campus students have many roles which they enact in daily life, most will be complementary and recognised by their family and associates as legitimate. However, entry into student life is often at odds with established roles, and conflicts sometimes arise. On-campus students also experience role conflicts but they have their fellow students to support them. Off-campus students are disadvantaged if they have no one with whom to share their experiences. One student reported that she had lost some friends when she enrolled at Deakin as they thought she was most peculiar choosing to study. A new reference group (Shibutani 1971) (6) is necessary for such students who badly need role support if they are to confidently enact and reinforce their new identities (McCall and Simmons 1978 Ch.6).(7)

In the absence of physical buildings, other students and academics, off-campus students are in fact creating their own version of the university. Student support groups are attempting to recreate in cities, outer suburbs and rural villages their versions of student life which they believe on-campus students enjoy.

These include cameraderie among themselves and in some cases the achievement of a perceived legitimate access to academics who many beginning students see as unapproachable. A study in 1986 carried out by Deakin's Institute of Distance Education suggested that an over-riding need existed for the learning experience to be personalised (Northcott and Shapcott 1986:8) (8). Membership of a support group appears to reduce the conflict perspective from which many new students view their relationship with the university. Association with experienced students and/or staff in informal settings humanises the formidable enterprise of distance education and places it more comfortably within the sphere of more common enterprises. 'Interaction with others can temper the otherwise authoritarian style of a course and motivate the student to persevere by providing psychological support and a degree of pacing' (Daniel and Marquis 1979:36) (2). It is a difficult, if not impossible task to recreate any version of the university in isolation and therefore a joint enterprise led by the experienced student with some limited contribution from academics, achieves more credible results for the novice and minimises the possibility of discrepancies between the official objective reality and the group's subjective reality.

Group meetings, which I have attended among four different groups are concerned with the achievement of a number of different tasks. Most easily identified there is the general cameraderie among established students which assists the initiation of new students for whom the group can provide a successful rite of passage through the liminal phase. Failure to pass through to the status of established student appears to be a contributing factor in a number of early withdrawals so this function is to be applauded and assisted by academics. A student comment in a questionnaire puts the position succinctly.

> ' In isolation I think that I would have dropped out very early in the course. The study material is great but nothing compares to discussion with someone who has done your subject or is working it out alongside you'

Interactionist sociologist Peter Berger suggests that individuals choose their associates in order to sustain their self-interpretation, '..every act of social affiliation entails a choice of identity... (1963: Ch 5) (9). Support group membership can satisfy this need. Goffman, another interactionist, believes that the self is situated in social roles and the individual is looking for activities which will confirm that identity (1959) (10). A student who had studied off-campus some years earlier and had recently returned to study remarked that for her group membership was socially so important that she would not consider dropping out again as that would mean losing the interaction which the support group provided. Through role support group membership can provide constant reinforcement of the new, developing student identity and the other members, especially more advanced students, quickly assume roles of significant others in the transitional process. One third year student said that he found it encouraging to share the problems of other students and enjoyed helping them.

Social psychologist Arnold Tannenbaum writing on the importance of informal groups at work observed that anxiety and frustration act to bring people together when there are others experiencing similar problems (1966:28) (11). It is misleading however to focus only on the difficulties off-campus students face as the groups also function to congratulate one another and move students through the transition from 'fresher' to experienced campaigner who will be advising others within a short period. One quote from a student is particularly significant here.

> 'We are all on the same boat, so we teach
> eachother not only how to swim but also
> why we should learn to swim.'

Less readily observable but of great significance to academics is what David Harris has identified as student instrumentalism (1987:121) (12). This involves the recognition by students that success at university is the result of successfully playing the game in coping with assessment. Thus the groups function both to wise up newcomers of the limits within which the game may be played and where possible gain the support of academics who will, wittingly or unwittingly, add greatly to the stock of knowledge of what constitutes the university culture. Harris refers to this activity at the Open University as the search for the 'cultural capital' which is perceived as necessary for success (ibid). There is nothing sinister in this activity, on-campus students are constantly engaged in its pursuit through conversations in the cafeteria, attendance at tutorials and individual staff consultations. Students are aware of the games of strategy in which they engage. There are, of course, risks for the first rate student that they will be exploited by those less talented. One experienced student reported that she had chosen her group members very carefully having felt used by a few students in the past. The willingness of many excellent students to work with others doing the same course, or a course they have done previously suggests that reciprocity is more intangible than a crude exchange of papers. Factors of prestige usually prevent the exchanges from becoming too unbalanced.

Each student support group is the result of the initiative and persistence of one individual who has the energy and confidence to make the arrangements necessary to bring about the first meeting and to sustain the group through to establishment. The enthusiam of the leader, a middle-aged woman in most groups I have studied, is crucial to the success of the group. In most cases the leader is a student who has already studied for at least two semesters and who has a desire to enable other, often less experienced students to meet and establish themselves as students in their own eyes and in those of their families. This person may choose to act as an intermediary between the students and staff and in effect becomes a broker facilitating exchanges and linking networks as s/he has greater knowledge of the system than the others. Boissevain suggests that the existence of brokers is indicative of local power structures becoming ineffective which results in the necessity of alternative unofficial channels being opened (1975 147-169) (13). The proliferation of student groups, especially those with strong leaders may perhaps indicate to university administrators a need to re-examine their lines of communication between the university and its off-campus students. Sewart (1981:10) (14) stresses the importance of an intermediary in humanising the relations between the university and the student, to provide advice and support and to reverse the tendency to offer systems from the standpoint of the institutions. He is speaking of paid employees of the Open University, tutors and tutor-counsellors who work with students through study centres. Deakin University used a similar system in its early years but has contracted these services considerably in the economic constraints of the1980s. The appearance of support groups led by students prepared to partially fill these roles perhaps calls for a reassessment of off-campus needs.

If the appearance of student support groups is more than a transitory phenomenom academics need to ask themselves a number of questions. These include the degree of recognition they are prepared to accord groups and the limits they wish to set. For example, should academics and Student Centre actively encourage the formation of groups? At Deakin encouragement is passive and amounts to little more than provision of lists of classmates to students who have not declined the opportunity to have their names included. Advice on forming groups is included but the enterprise is presented as something which is student rather than university business. This is perhaps the best policy but recent developments suggest that students are expecting more input from staff and want to enjoy the opportunities for student-staff interaction which is taken for granted by on-campus students. More formalised arrangements at UNE in NSW (Bowlay and Small 1983: 445-467) (15) and Massey University in New Zealand (Williams and Williams 1987: 51-64) (16) utilise the voluntary services of graduates and senior students respectively to co-ordinate support groups. Mature off-campus students see academics in a different light from young on-campus students. Once they are established as students they see themselves engaged in a common enterprise of academic enquiry in which the staff are co-participants. They need to try out ideas first on one another, then on academics in non-assessable situations. Distance educators must recognise this need as it has serious resource implications and for some is a serious challenge to the cherished dream of the perfect, all inclusive study guide. New technologies and the imaginative use of older ones can provide many of the answers to these problems but the hard fact remains that good teaching is often labour intensive (Northcott and Shapcott 1986:11) (8). The production of study guides will remain distance education's main official vehicle for the transmission of information but cultur is not so readily learned. An off-campus university education will always consist of more than having worked through about 50 study guides. If academics abdicate from the task of assisting students to negotiate meanings they will construct their own realities which may be a recipe for failure (Meacham 1984:48) (3). A major conclusion from a Deakin University distance education research project on the role of Study Centres in distance education will serve as a concluding quote.

> Students are saying that without this human dimension they cannot study effectively and some would probably not choose to study with us at all. For many, personal contact of some kind is the basis of their studentship (Northcott and Shapcott 1986:14). (8)

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Support for students in a Distance Learning Programme

- an experience with a course in Fashion and Clothing Manufacture

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and those who seldom attempted any expressed views that some of the activities were too easy. The answers were too easily obtained from the text materials. On the other hand, many also said that they will attempt those activities which require further thinking or those related to their work experience. Obviously this reveals one important point. We should avoid, as far as possible, the inclusion of low grade activities in the study materials. Higher grade activities requiring students to do some thinking or those relating to their actual work experience would be more preferable.

Quantity of the activities

The quantity of activities is the other reason which students have expressed for not attempting them. Some said that there were too many activities. After attempting some at the beginning, they began to skip activities and just concentrate on the text. Thus this excessive quantity of activities may cause an adverse effect on students. Further work needs to be done to determine the optimum quantity of activities.

3.2 Support Incorporated Within the Learning System

In my experience, student support incorporated within the learning system can be of two kinds. The first kind is of pure academic support in which we give answers, solutions or guidelines to students queries on the study materials. The second kind is of spiritual support in which we give help and advice to students, on problems outside the learning materials. Cases like helping them to get access to a study place in the library, suggesting methods to solve their problems in their daily work, giving suggestions for choosing the study modules in the following terms, etc. all belong to this category. In a distance learning programme, both kinds of supports are of vital importance. This is because the support of peers and of institutional framework is weaker for distance students when compared with on-campus student.

In the Clothing Course, we have also taken both academic and spiritual support into consideration and methods to carry out those supports are (i) tutorial and (ii) telephone counselling.

Tutorials

In a distance learning course, the tutorial is the most common method for giving learning support to students. In the evaluation discussion of the Clothing Course, all students said they like tutorial sessions. However, many of them have expressed the desirability for tutors to carry out more activities at the tutorial sessions rather than just questions and answers. Activities like discussions, practical demonstrations, telling of their experience in the subject area etc. are more preferable. This obviously suggests that every tutor responsible for conducting tutorials of a distance learning course should be trained so that he knows what kinds of activities may be carried out in the tutorial session and the methods of conducting those activities.

Up to now many of our tutors have not undergone a proper training. But because of this finding it has been planned that in the future tutors for the Clothing Course will be requested to attend a training course and only if they show satisfactory performance in the assessment, will they be allowed to take up the tutorial job.

Telephone Counselling

In my opinion, telephone counselling should, in places like Hong Kong where there is no financial involvement in the local telephone call, be the quickest and the easiest way for improve the quality of support within the learning materials and to further consider the quantity of activities. Many of the other student supporting activities are carried out by the tutors and telephone counsellors. Conducting tutorials, telephone counselling and assignment marking are all done by tutors and counsellors. Thus if tutors and telephone counsellors are trained properly, not only can the learning system operate properly, but also the interaction between teachers and students can increase.

INTERNATIONAL COUNCIL FOR
DISTANCE EDUCATION

The Open
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INTERACTION AND INDEPENDENCE;

STUDENT SUPPORT IN DISTANCE EDUCATION AND OPEN LEARNING

PROMOTING INTERACTION: MAINTAINING INDEPENDENCE
Swallowing the mixture?

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An international conference presented by

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Discourse as a metaphor for distance education

Education is still dominated by metaphors implying some sort of one-way process such as the filling of a vessel, or the shaping of a material, or as guiding someone on a journey. The trouble with such metaphors is that, if they are taken to be comprehensive statements, they entail thoroughly reductionist notions about both education and people. They give rise to talk about educational 'techniques' or 'tools' as if by 'replacing components' or 'making the right connections' or 'plugging leaks' the effectiveness of education could be ensured. These metaphors do have a certain legitimacy, but their constant use is to be deplored because it reinforces both instrumental views about education and mechanistic views about people. Indeed in distance education they are part of a larger 'industrial' metaphor which has sufficient currency, no doubt because of its partial legitimacy, to continue influencing governments and senior administrators in the framing and execution of policy.

Fortunately, there are alternative metaphors based on the general notion that education is not essentially something done to people but rather something done by or among people. Thus 'guided didactic conversation' (Holmberg, 1985)[1] and 'dialogue' (Gillard, 1981[2]; Evans and Nation 1989[3]) both indicate that there is a relationship established between people in which some form of communicative interaction takes place. Both these terms are useful but there is a possibility that the very familiarity which makes them effective as metaphors may also serve to diminish their value somewhat (Candy, 1988, pp. 105f)[4]. It seems to me desirable, therefore, to extend the range of metaphor by use of the term 'discourse', a common enough term but one less familiar than either conversation or dialogue. Discourse has the advantage that it has a range of uses from the completely non-interactive monologue to the highly interactive group discussion in which the leading role may shift and deliberate or spontaneous sub-group discussions may occur.

I am not proposing a wholly new metaphor, since discourse shares much with conversation and dialogue and all are clearly involved in education already. I am suggesting that the recent insights of discourse analysis refresh this particular metaphor and make it one which, as Candy (p. 98) points out, '...may potentially be of use in educational research for ...representing potential solutions and insights.'

Discourse, interaction and role

For some linguists the emphasis in discourse analysis is on 'information flow and propositional content' but:

> ...if we abstract 'conveying propositional content' as the common property of written discourses, we have woefully impoverished the notion of discourse as a human communicative act. (Dillon quoted in Fox, 1987, p. 2)[5].

However, other linguists do use the term:

> ...to refer to the entity consisting of the text (verbal and non-verbal messages) and of the circumstances in which the text is produced and interpreted (who is the speaker, whom is he addressing, what is his communicative aim etc) (Holec, 1985, p. 22)[6].

It is the more complex, interactive concept of discourse which I believe offers a fruitful metaphor for education in general and for distance education in particular because it shifts attention away from preoccupation with the intrinsic qualities of 'texts' provided by an institution and towards concern about the kinds of interactions that may occur between and among teachers, students and other people-including the creation of their own texts - in which those institutions texts may, and usually do, play a part.

The term discourse is valuable because it can embrace a wide range of situations including such unpredictable but highly interactive events as brainstorming sessions. The important feature of brainstorming which helps to make it effective is the equality of roles in the discourse. Some roles may be assigned because of office, such as chairing a session or taking notes, but in terms of the discussion all participants have equal rights to 'take the floor', to address each other, and so on. Many analyses of educational discourse - usually face-to-face discussions - show teachers with a greater number and diversity of interactive acts when compared with students. In other words they assume dominant roles in regulating both student behaviour and the flow of the discourse, and the same proves true in distance education where independence is often limited by attempts to encourage interaction.

It was in the light of this perceived conflict between interaction and independence that Daniel and Marquis (1979)[7] wrote their paper, but their concepts of interaction and independence became problematic in the context of discourse. They defined interaction in terms of some form of direct contact between each student and another person, or persons (p. 30), but the activities they listed as examples reveal that all the contacts envisaged were between a student and various staff of the educational institution, and they took it for granted that any communication would be about some aspect of study. They excluded all other kinds of interaction, such as contacts among the students, and they specifically excluded interaction with text despite the fact that in most of the allowable interactions the text was in reality present as a silent but active participant. Thus their model of distance education was teacher dominated, and their use of the word independence, ...to denote those learning activities where there is no interaction as we have defined it, is by definition embedded in the same model.

It may be impossible to eliminate all vestiges of teacher dominance, indeed it may be undesirable in many cases, but it is at least possible to adopt the discourse model in part by using the text to encourage a wider range of interactions in which students function with the maximum possible independence.

The place of text in education

Distance education is, and always has been, heavily dependent on some form of text for its basic teaching materials, and a great deal of the lore of distance education is concerned with making such texts effective against the implicit, or sometimes explicit, yardstick of face-to-face teaching. Yet, in what Daniel and Marquis called a '...much quoted but little read comparative study on the effectiveness of various types of instruction...' (p.41), Dubin and Taveggia commented:

> "It may very well be that the most pervasive commonality among teaching methods is the employment of and dependence on textbooks and other reading materials. Perhaps the 'no difference' results of comparing teaching methods can be attributed largely to the powerful impact of textbooks which cannot be washed out by any known methods of instruction! More important, however, if textbooks are the most significant influence in student learning, then future studies should examine differences among textbooks rather than among college students." (1986, p 47)"

Even in those cases in face-to-face education where no textbook is used, the notes derived from lectures become a de facto text with which the students must interact if they are to learn anything. The quality of these student versions of the text is poor relative to the original when compiled from a spoken text - that is lectures with little or no blackboard writing - and relatively good when virtually transcribed from a well prepared set of blackboard notes - that is another written text.

On this basis the suggestion made by Daniel and Marquis (p. 32), that it is the flexibility of written texts which facilitates independent study, deserves re-examination. It is the degree of flexibility of each kind of text that determines the extent of its use in education at all. What facilitates independent study of the formal kind, known as distance education, is the manner in which those texts are acquired by the participants. In either case the educational outcomes are very much dependent on the availability of effective student support. In this the distant student appears to be at an advantage in some respects over the conventional student, a conclusion borne out by experience at Deakin University.

I conclude that text is basic to all education and that the interactions students have with both texts and people are equally important. Indeed, many of the educational interactions they have with people will not be simple two-person discourses but complex discourses between at least two people and a text. The nature and quality of that text is therefore of considerable significance, but I want to avoid giving the impression that such things as better study guides or a richer medica mix should in themselves be the main focus of our attention in distance education, because to do so is to risk regression towards the discourse as monologue model. Nevertheless, I believe that much can be done through such texts, however good or bad they may be in other respects, to foster discourse in its richer sense.

The tutorial in print approach

One of the accepted ways of writing good distance education material is to treat it as a 'tutorial in print'. Rowntree suggested that, since feedback on assignments was generally rather diffuse in nature and too late to be really useful, continuous tutorial feedback could best be offered through in-text exercises to give the student, '...the opportunity to keep coming up with his own ideas and getting feedback as to how they compare with other people's.' (Rowntree, 1973, p.2)"

Conventional in-text exercises can never really meet that need since they can never provide the opportunity for students to adopt other roles in the discourse, especially leading ones. In other words, the typical in-text exercise presupposes that the text as teacher maintains the dominant role in the discourse. The common solution to this problem is some group activity, either face-to-face or through the telecommunications system, examples of which are listed by Daniel and Marquis (p.30). Unfortunately, to many people this is an opportunity for some 'actual teaching' (Juler, 1984, p.8)[10] which still too often implies teacher dominance.

In the last ten years at Deakin some interesting alternative approaches have emerged in which students are encouraged through the text to adopt leading roles in interacting with people either inside or outside the normal academic community. The School of Education course: Curriculum Theory, for example, is conducted as a 'critical community' (Deakin, 1986, p.36)[11] which seems good in theory in that all participants have not only the right but the obligation to assume the full range of roles. Despite this, it was judged only partially successful because the course team came to believe that face-to-face interaction was central to the concept of community on which the course was based. Moreover, they concluded that distance education was an inadequate substitute, not only because of its 'attenuation of relationships' but because it actually, '...models these attenuated relationships and thus creates conditions for their reproduction.' (Fitzclarence and Kemmis, 1989, p. 172)[12].

The discourse model offers an alternative to this pessimistic view by suggesting that the problem lies more in the subordinate roles assigned to students by the text. It also offers the possibility of an elasticity and openness in relationships which was perceived to be absent from the course. It is interesting to note that students themselves saw the relationship issue as problematic and proposed other, more direct personal links between themselves as a solution.

Neither the School of Architecture's House-watching assignment nor the APEA Postgraduate Diploma in Management, to quote two other examples, makes any attempt to establish or encourage the kind of critical community which is central to Curriculum Theory; but they do succeed in getting students to interact in a relatively independent way with appropriate people outside the bounds of the normal academic community. In the House-watching assignment this is achieved by requiring them to record details '...of interviews with tradesmen, contractors and inspectors' on building sites (Deakin University, 1989)[13] which certainly helps them to develop their critical abilities. In the APEA Diploma there is encouragement for students to interact with other professionals in their locality which has led to the formation of independent sub-groups supported by employers (Davis, 1989)[14]. Both examples foster discourse of a kind which is less tidy than some people might wish - rather like that at a residential conference - but which is far more likely to create enduring meaning for the participants than many more structured activities.

The discourse model of distance education

The mention of residential conferences leads me to propose my discourse model of distance education which is based on the extended community concept underlying the above examples.

A typical residential conference is organised around a particular theme in distance education. The theme is published in advance but the organisers do not wish to constrain participants any more than necessary so they add that, 'Papers are invited within the broad framework of ideas delineated above, and will be bound and distributed at the conference...'. Thus a text has begun to emerge, but no-one imagines that the text is definitive or that it should dominate the proceedings. It is a spring board for both formal and informal discussion which, in the latter case, may very well draw in people who are neither official participants nor distance education practitioners. Arising from this process there should be much critical reflection on, and consequent enrichment of, distance education practice; and the meanings formed in various ephemeral sub-groups, whether organised or impromptu, will inevitably inform the central discourse and contribute to its meaning for all those who take part in it.

So far as the practice of distance education is concerned, the conference organisers represent the educational institution or course team; the theme represents the subject of the course in question; the participants represent the teachers, students, and any consultants, textbooks, readings, etc; the formal conference sessions represent controlled interactions such as assignment submissions; and the informal discussions represent the kinds of unplanned and uncontrolled interactions mentioned in the examples above.

The discourse model, as I have proposed it, suggests that any organised distance education process should be to some extent unstructured and unpredictable. At one extreme it can be a free flowing, almost rambling, complex of conversations taking place in a critical community which is never fixed but which expands and contracts as necessary. At the other extreme it is still not completely structured or predictable because it refuses to try and control all aspects either of student behaviour or of their modes of interaction. Whichever way it is applied, the model does provide solutions and insights for some of the problems of distance education. In particular, to understand the structure of discourse and the significance of role, especially in interaction, helps to resolve the apparent conflict between interaction and independence. By drawing more and more people into the discourse- people who are not part of the core community which consists of the teachers and students - opportunities for independent interaction can be provided in which meaning is created for all participants.

In my view, further critical reflection on distance education practice, especially if it occurs in the least structured and least predictable manner described above, is likely to reveal more ways in which students can assume interactive roles in an independent way, both fully and effectively, in the discourse which is distance education.

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INTERNATIONAL COUNCIL FOR
DISTANCE EDUCATION

The Open
University

INTERACTION AND INDEPENDENCE;

STUDENT SUPPORT IN DISTANCE EDUCATION AND OPEN LEARNING

BEYOND INTERACTION AND INDEPENDENCE:
THE IGNOU EXPERIENCE

by

Badri N. Koul

An international conference presented by
the International Council for Distance Education
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Daniel and Marquis (1979)[1] use the terms interaction and independence restrictively in a pedagogic sense as their concern is improvements in the process of teaching and learning. Here, the principle involved is that as the situation outside the house is happy, we need to improve the conditions inside. Obviously, the concern shown is for micro issues. But there are situations in which everything outside the house is not happy, and they force us to macro issues. While our concern for micro issues is well-founded, a neglect of macro ones may endanger the distance and open education movements. With this point in mind, I thought it worthwhile to extend the connotations of the expressions interaction and independence to macro issues, whereby I shall raise just two questions and seek indulgence thereof. Because of the very nature of the choice made, the presentation is speculative.

An instance of those different situations, which I mentioned above, is India.

<> With an area of 3287782 km and a population of 778520000, measuring about 3500 km from east to west and about the same from north to south, temperatures ranging from -40° c to +48° c, and a terrain that includes some of the highest mountains of the world, vast plains, river valleys, plateaus, deserts, rain forests, islands, coasts, fertile and barren lands, India inhabits a mixed stock of dark, fair and yellow races that have lived through great civilizations and empires, through periods of political tranquillity and turmoil, raising some of the population to be comparable to the most civilized people of today and leaving some behind to live the tribal lives they lived hundreds of years ago -- 200 million people live below the poverty line.[2]

<> Putting the different levels of literacy together, 60% of the population is still illiterate, [3] and one Australia is added and accommodated every year.

<> There are at least 15 major languages, each of which is currently used by millions in their every-day life of social and commercial exchange. These languages have centuries old traditions -- oral as well as written, and literatures of immense variety and superlative quality.

<> A rough calculation showed that the population of the teachers of English working at different levels of instruction in 1978, allowing a 20% rise in their numbers for every 7 years, needed 171 years to train them all with the existing means.[4]

<> Concerted effort of successive governments in the recent years, activities of social service organisations, and the consequent awakening among the people have created an atmosphere congenial to a social upsurge -- those educated ask for more education, those uneducated make their claims to education emphatically, those for social mobility demand training for it, those who remained deprived so far ask for their due...all this on their own terms, in their own places, in their own languages, within their own cultural milieu on less than market rates, and the popular government is favourably inclined to all these aspirations.

A scenario of this kind raises questions which appear to be prior to those brought under interaction and independence. These are questions of macro dimensions -- fundamental curricular questions as against pedagogic ones:

1. How to operationalize a truly open distance education system in a situation like the one described above?

2. How to reconcile the discipline based commitments of a large number of academics with those imposed by the practice of open distance education?[5]

3. How to accommodate the culture of socially relevant and need based courses within the traditional university culture of higher education?

4. How may open distance education give a new direction to the educational ethos and practice of a particular country?

5. How and what programmes to develop for the majority population of illiterate people?

6. How to satisfy the linguistic aspirations of large numbers of students, as many of them would need courses in their own languages?

7. How to bridge the gap between the demand and the supply of reasonably trained personnel in various fields of activity?

8. How to cope with the door-crashing demand for admissions in various courses available all over the country?

9. How to save on resources (temporal, financial and human) in the process of making courses available for a variety of means and purposes?[6]

The above list is not exhaustive, it is not meant to be. Instead, it is illustrative of the kinds of problem that the Indian context raises. I assume the problems are worthy of the attention and concern of distance educators, as it is the system of distance and open education that is seen as the only answer to them.

When established in the year 1985, the Indira Gandhi National Open University, New Delhi, found itself faced with the issues of the kind listed above; and the going is difficult because of its unique dual mandate[7] -- to function as a university like other universities, and also to promote open and distance education systems and to coordinate and determine the standards in such systems in the country.

To meet the challenge, among other steps, committees were set up to develop the university language policy, to outline a workable policy to cater to the needs of geographically remote areas and educationally backward populations, to promote and coordinate the working of the open and distance education systems in the country, etc. And work started in real earnest to prepare need based programmes at various levels of instruction.

The university started with its first intake of about 4500 students in January 1987, and today there are 55,000 students on its rolls. These students are provided support services at 120 study centres (equipped with facilities for audio, video and library work, besides tutoring etc.) which work under 12 regional centres. While it is the part-time staff that work at study centres, the staff at regional centres are full-time employees of the university. The plan is to have one regional centre in each state and union territory, and at least one study centre in each district. With the passage of time more and more responsibilities will be shouldered by the regional centres. The number of part-time workers is already over 5000 and of full-time workers there are 123 academics and 590 non-academics. A first-hand experience of this colossal exercise makes one feel humble, and then comes the realization that there needs to be interaction and independence at other levels as well. To explain the point, I shall dwell upon the first programme of the university in some detail--beginning with its genesis.

It did not take long to realize that an operation of the magnitude outlined above cannot be successful unless the personnel involved knew what was expected of them, had minimal training for the purpose and had the right attitude towards their work and institution. This certainly is true for any enterprise, but any operation pertaining to distance education is likely to start with a disadvantage today (fifty years hence it may be a different story altogether) -- the academic personnel who come to work for it are in most cases the ones who have been brought up in the culture of conventional face-to-face education and others have had their training in the civil service work culture. Both these types have to be deoriented and then reoriented to function purposefully in the culture of open distance education. Taking cognizance of this view, the IGNOU decided to prepare and launch a Diploma Programme in Distance Education to build human resources for promoting, sustaining and improving the systems of open and distance education, which hopefully would initiate a new educational culture in the country. It was decided[8] that the programme would consist of four courses and a project: (i) Growth and Philosophy of Distance Education, (ii) Prerequisites and Practices in Distance Education, (iii) Preparation of Self-instructional Materials, (iv) Student Support Services, and the Project would depend on one's own choice to be made from among 16 topics belonging to 6 different themes pertaining to distance education.

The work on the programme began in February 1986 when there was only one academic on staff to work for it; and he had to help other schools in the area of unit design etc. At this stage, we were aware of two courses[9] in use outside India. When we requested for one of them the response received was "Unfortunately, copyright law...prevents us from selling copies of the...materials. We do, however, recruit students from overseas...Any student would be provided with a full set of the materials..."[10]

The IGNOU had tried for interaction but did not succeed. Had it succeeded, this interaction would have influenced our efforts to help our students right from the stage of planning, through course preparation to the stage of course implementation. This would have been interaction of a non-restrictive type, interaction at a macro-level. And the objective of this interaction was to pave way for independence (in a non-restrictive sense). Left to ourselves, using in all four and a half man years,[11] 81% of the print material was prepared in the Division of Distance Education: the remaining 19% of the material was prepared by experts outside the university, and the diploma programme was launched in January 1987. Admitting only those who have either a post-graduate degree in any subject whatsoever or a professional degree, it is now the third batch of students who are on the course besides the cohorts of 1987 and 1988.

Acad. Session	Students admitted	Withdrawals	Diplomas awarded to	Attended orientation for tutoring etc.	Appointed as tutors for Dip. in Dis. Edn.
1987-88	1098	138	-	-	-
1988-89	1093	300	216	98	42
1989-90	1140	-	-	-	68

During the first year of the programme, besides the audio and video support available at study centres, 41 two-day intensive contact programmes were arranged. During the second year, besides 11 such contact programmes, 21 study centres were activated for regular tutoring and counselling. This year the number of activated centres has gone up to 31.

Apart from this diploma programme, to meet the immediate needs of course writers and tutors, short two-day orientation programmes are being run simultaneously. Besides, a Certificate Programme in Distance Education has already been prepared, and regulations for launching and making it compulsory for all those who take up tutoring and/or academic-counselling at the university are under consideration. And then, work is on for a post-graduate degree in Distance Education meant for those who want to move beyond the Diploma Programme.

Having worked very intimately on these and other programmes of the university, three views have dawned on me. I think I am still groping, but here they are:

1. Developing and running the training programmes is essentially an exercise in providing student support services[12] both outside and inside the study centres. Then, in a situation like that of India, except the school-going age group of the population, everybody else is seen as a potential student of the system of open distance education, if not necessarily that of the IGNOU, and attempts have to be made to cater to his/her needs whether or not he/she is literate. The implication is that the connotation of the expression student support services appears to be broadening to the extent that it pertains not only to the work at study centres but in a sense becomes synonymous with the entire operation of distance education -- curriculum development, course preparation to course implementation. To keep the distinction we may use the expression macro-level student support services for the broader connotation suggested above.

2. Accordingly, independence[13] in learning seems to emerge as the ultimate objective of open education, and open education by itself the fourth major revolution in the evolutionary process of education.

How the fourth? The first significant breakthrough in the process of education must have been when man, in the process of moving out of animaldom, passed on to its progeny what it had learnt from the environment -- to use stones, flint and fire, for example. Having lived through centuries under the influence of that kind of learning, the second significant educational revolution was the one when man reached the stage of living in tribes and/or sects. This second phase may be called the phase of sectarian education which came to have its locale of operation at places like monasteries or tribal headquarters and the content of this education was what the social group thought was best in terms of the lines of thought, beliefs, ways of living, social development and survival. It appears that this stage was significant not only for the kind of curriculum (tribe or sect based) and the seat of learning (the monastery etc.) which it formalized, but also for the 'restrictions' on imparting and obtaining education that it imposed. To uphold these restrictions effectively, education became progressively a teacher and/or institution centred phenomenon. The third major phase materialized when mankind stepped into the era of liberal education--the curricula and the emphasis in them changed, and the seats of learning rose in and around localities of men and women. And correspondingly new 'restrictions' came into being. If "openness" is accepted as the philosophic basis of the education with the 'restrictions' which have become socio-educational norms the world over, and also if distance mode is accepted as that aggregate of ways and means of education which bring it to the learner at all times, all places in all situations and all conditions, for all talents, purposes and intentions, then open distance education could be reckoned the fourth, and by far the most enlightened and potent revolution in the evolutionary process of education. In this phase the curricula should change again, they should become more flexible and locationally relevant, and all types of 'restriction' should dissolve and disappear progressively.

It is in this sense that open education appears to be the promoter of independence, (used in the non-restrictive sense), i.e., that highly ideal state of education in which the learner has complete understanding of his/her potentialities, is conscious of his/her duties towards mankind and seeks education to unfold and utilize those potentialities for self and extra-self fulfilment. He/she identifies the objectives of his/her desired course of study, chooses the materials that will help him/her achieve those objectives, decides on the methods which with the chosen materials achieve his/her objectives and then decides on the evaluation that is in conjoint relation with the objectives. These objectives are such that besides bringing self-fulfilment to the learner concerned, they do good to mankind. This, of course, is a tall order, to the extent of being an educational utopia.

3. It is a utopia because the learner, especially in the third world countries, is blinded by what is available, as he/she isn't trained to look inwards, instead he/she is looking for a label that adds a value to him/her for the employment market in which the routine kind of education gets devalued with every passing year. But there are instances[14] which show that after all, this educational utopia is achievable. And to achieve it universally, we need interaction: interaction in a non-restrictive sense, interaction at the macro-level.

The point to make is that we have reached a stage when interaction at the macro-level is as much an imperative as that at the micro-level. At the pragmatic level it implies something like all distance educators, distance students[15] and distance and/or open institutions get together and promote and support each other's cause by unconditional exchange of whatever can be offered mutually purposefully, etc. I am aware of the dangers of and difficulties in what is being suggested, but I am reminded of ancient civilizations which flourished as a result of intense restrictive interaction and succeeded in creating oases which remained surrounded by ever dangerous deserts. Subsequently, either they decomposed by themselves, or the deserts closed in and the oases disappeared. Once again my feet are not on firm ground, as the analogy is questionable as far as the modern advances in technology are concerned. But, I am speculating of the next stage in the evolutionary development of the human species -- the development of a more humane mind. It is already clear that intellectual oases have come into existence, and equally clear is that these oases are in danger. It is interesting that politicians come together to form power blocks and armaments, apparently to save the world from the dangers to be, but the custodians of intellectual processes never do. Could distance and open education pave the way? Since it can, shouldn't we try?

To sum up, taking off from the notions of student support services, interaction and independence as they are understood in the literature, I have tried to speculate of them at a macro-level, at which I see the entire gamut of open distance education as an exercise in student support services, independence as the ultimate educational objective of enlightened mankind and interaction as the global effort to achieve that objective. The last aspect appears to be the operational one, and that brings me to the crux of my speculation -- the two-in-one question, "Should we or should we not, and if we should, how may we effect this interaction; interaction at the macro-level?" Obviously, I am thinking beyond restrictive interaction and independence, beyond councils and associations, of genuine activities that may not only save, but also extend and extend fast, faster and faster still in all directions the few oases we have around us, lest our progeny should find us wanting.

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THE THEORY OF DISTANCE EDUCATION:

some recent literature

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The theory of distance education: some recent literature.

Abstract. In this paper Michael Moore reviews a selection of recent literature, mostly North American, that recounts and builds on his seminal "Two-dimensional theory".

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The history.

Between 1970 and 1972 I carried out research that resulted in the development of certain concepts that were proposed as the distinguishing elements of a previously unidentified field of study in American education. The field was Distance Education. Two articles published in 1972 were among the very first attempts in English to define distance education and its constituent elements. These were said to be learner independence, which I called learner autonomy, interaction between learner and instructor which I called dialogue, and certain characteristics of course design that I called structure (Moore 1972a, 1972b, 1977, 1983).

At the outset of this work, the intention was to map out the changing field of correspondence instruction, or independent study as it was called in the United States, and to relate it to general educational theory, in which there was an almost absolute absence of any mention of non-classroom education. It soon became apparent that this field of study was wider than correspondence study alone, and so the question that guided the research was reworded as follows: "Does an analysis of selected literature of the various methods used to instruct independent learners reveal a pattern of educational elements that can be used to differentiate the field and define it?"

After struggling to invent a new term that would encompass these various methods, I settled on an Anglicization of the concepts "Fernstudium" and "Fernunterricht" that I first heard used on a visit to the University of Wisconsin by Borje Holmberg in 1970. I added the idea of learner autonomy, which owed much to Wisconsin professor Charles Wedemeyer, especially his definition of Independent Learning in The Encyclopedia of Education (Wedemeyer 1971).

Distance was defined as a function of two variables called `dialogue' and `structure'. The following is Rumble's summary of the theory:

> " Dialogue describes the extent to which, in any educational programme, learner and educator are able to respond to each other. This is determined by the content of subject-matter which is studied, by the educational philosophy of the educator, by the personalities of educator and learner, and by environmental factors, the most important of which is the medium of communication. For example, an educational programme in which communication between educator and the independent learner is by radio or television permits no dialogue. A programme by correspondence is more dialogic, yet not to the same extent as one in which correspondence - or radio or television - is supplemented by telephone communication.
> Structure is a measure of an education programme's responsiveness to learners' individual needs. It expresses the extent to which educational objectives, teaching strategies, and evaluation methods are prepared for, or can be adapted to, the objectives, strategies, and evaluation methods of the learner. In a highly structured educational programme, the objectives and the methods to be used are determined for the learner, and are inflexible. In a linear, non-branching programmed text, for example, there is less

> opportunity for variation, according to the needs of a particular individual, than there is in those correspondence courses which permit a wide range of alternative responses by the tutor to individual students' questions and assignment submissions...In a programme in which there is little structure, and dialogue is easy, interaction between teacher and learner permits very personal and individual learning and teaching. Using these dimensions, the most distant programme would be one in which there was neither dialogue nor structure - an example would be a wholly self-directed programme of individual reading. At the other end of the continuum, the least distant programme would be one in which there is a high level of dialogue, with little pre-determined structure for example, an individually tailored tutorial programme. Most of what are commonly called distance education programmes fall somewhere betwen these two extremes- they have a measure of dialogue, as well as being more or less highly structured. This conceptualization also helps explain how a student learning in a `face-to-face' environment, whose sole educational activity is to go to lectures to take notes, can be at a greater transactional distance than a student on a distance education course who regularly meets, corresponds with, or telephones his tutor."

The second dimension.

The second dimension was a classification of educational programs according to the amount of learner autonomy exercised. It resulted in a twenty-four-celled grid.

> Smith describes it as follows: "This was derived from the fact that in the most simple terms an undertaking like a learning project, a course, or even a single class session has three major activities to be carried out: preparation, execution, and evaluation. It is planned, conducted, and evaluated. Programs can be plotted on a grid that places those permitting the learner to exercise a great deal of autonomy over all three functions at one extreme (Type 1) and those permitting very little learner autonomy in any of the three (Type 8) at the other extreme." --"In addition to providing a way to classify programs according to the nature and degree of self-direction they entail, the typology suggests a way to look at individual preferences for control of the respective phases in an

educational endeavor. One might prefer (and therefore seek or be directed toward) programs that emphasize the degree of autonomy found in any of the respective combinations."

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Theoretical research of the last two years.

A common concern of many thinkers about distance education is the inter-relationship of dialogue, structure and autonomy; apart from early contributions made by other early theorists, including Wedemeyer, Holmberg and Keegan, there have been hundreds of references to and uses of the theory by comparative newcomers in recent years in many countries. A special concern of recent writers has been the effect on the inter-relationships of the instructional possibilities opened up by the new interactive telecommunications.

Four articles that touch on this issue have been published in a recent anthology, and are reviewed here. They are the work of Garrison and Shale and Garrison and Baynton in Canada, Keegan in Australia, and Saba in the United States (Moore and Clark, 1989).

An interest in telecommunications lead Garrison and Shale to attack Keegan's stipulation that a distinguishing feature of distance education is the "quasi-permanent absence of the learning group". These authors agree that distance education "implies some form of interaction or dialogue between teacher and taught", and that "technical media are required to mediate this communication." They argue that Keegan's definition is too limiting, and only defines " a private print-based form of study and does not adequately consider new generations of technological delivery." (p.3). They propose that the distinguishing feature of distance education is no more than "that it is a means of extending access to education to those who might otherwise be excluded from an educational experience."(p.4-5). In my opinion this is too vague, and of no real help, since distance education is frequently chosen by individuals and organizations for reasons besides the unavailability of traditional educational methods. By this definition a face-to-face evening class is also distance education since it is a means of extending access etc., which is ridiculous. Neither are they correct, bearing in mind we are trying to describe what IS rather than to prescribe what we may prefer, in saying distance education "means something more than simply reading a text or watching a television broadcast". Sometimes it does and sometimes it doesn't. It is true that most practitioners are especially concerned with the ongoing interaction between teachers and learners. However there are different types and levels of interaction (see Moore 1989) and the concept of dialogue also incorporates those interactions that are within a page, a study guide, a text, a television program or audio-tape as well as those delivered through the more highly dialogic media of telecommunications.

Keegan, in his reply to the Garrison and Shale critique recognizes their basic premise "that recent innovations in communications technology have made the boundaries between distance and traditional education less distinguishable". To address this blurring of the boundaries he cites my 1973 analysis which he says leads to the identification of two approaches to the concept of distance education, as follows:

"Position 1. Distance education is a teaching mode. With the development of new communication technology it will gradually merge with conventional provision so that the distinctions between the two become blurred. Distance education is seen as "a good thing."

Position 2. Within education there are two dimensions- conventional, oral group-based education, and education at a distance. Conventional education is dominant. Distance education is neutral, neither "good" or "bad" per se. The problems of conventional education are to be addressed by conventional education" (p.9).

My own position regarding this dichotomy is not too different from that of 1973. I think there is distance in all educational relationships, with distance measured by the extent of dialogue between learner and instructor, and structure of the teaching program. The autonomy of the learner is taken into account in varying degrees in all educational programmes.

What we normally refer to as distance education, where the geographic separation between learner and instructor is such that electronic or print communications media have to be employed to transmit the dialogue, are those programs that are characterised by greater distance. What we are normally referring to as Distance education is a subset of all educational programmes, the subset characterized by greater structure, lower dialogue and thus greater transactional distance. So to return to the dichotomy Keegan presents, which is not of my making, I agree with parts of both his position 1 and 2. I do not agree with his statement that distance education is simply a teaching mode, because it includes learning too, and is more rightly seen as a family of transactions between teachers and learners. It is a distinct educational mode in the sense that the more distant forms of teaching-learning can be recognized as having some very different characteristics from the less distant, or to be more exact the characteristics they share are of heightened significance in the more distant programs. In the continuum of educational programmes there is a "grey area" where the distinction between what would be called a distance education program and what is not, becomes blurred. But it doesn't matter greatly. It's as if geographers dispute the actual source point of a river, which is highly esoteric to the majority of the population who live by its waters, and even to most researchers who study its many other features. The point of definition and theory was never more than to provide the beginning, and the basis for the establishment of research and the improvement of practice, and the blur at the point of overlap between conventional education that has elements of distance and those educational programs that can be described as characteristically distant is of no great significance except to theorists.

Whether distance education is a "good thing" depends on the needs of learners, their ability to benefit more from a distance education programme than an alternative. For many people, for many subject areas, distance education is a good thing. For some it is not. All educators need to keep an open mind, and approach the possibility of using distance education with the needs of their learners uppermost in their minds. With this approach it is likely that distance education will indeed contribute to the improvement of conventional education, as conventional education has, and continues to offer much to distance education.

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As stated above, learner autonomy, like transactional distance is a qualitative, or continuous variable. In the early theorizing I called it the extent to which in a program the learner determines objectives, implementation procedures, and resources and evaluation. Note that by "extent" I mean that in some programs learners may have little part in the decision making, and there is no judgement that this is a good or bad thing. The opposite of learners exercising autonomy, as I pointed out in the 1973 paper, is teacher control. When we classify programs by the variable of learner autonomy, we are at the same time classifying them by the extent of teacher control. This is the idea taken up and developed by Garrison and Baynton. (Garrison & Baynton 1989).

Independence, or self-direction, they say, is only one part of the complex interaction among several components that characterize the educational process, the others being power and support, and all three constitute control. Control is not achieved simply by providing independence or freedom from outside influence. Control can be achieved only by striking a balance between independence and power and support through the process of two-way communication between the teacher and student. It is the dynamic balance between these three components that enables the student to develop and maintain control over the learning process.

While Garrison and Baynton correctly state my position that "physical separation of teacher and student does not necessarily grant independence to the student", they overstate it when they say :"Some distance educators view physical separation of teacher and learner as a significant characteristic of independence (Moore 1972, 1973). I don't think this is exactly the case. It is quite possible for learners in conventional, face-to-face education to exercise a high degree of autonomy, and it is quite common, as stated above for learners in distance education not to exercise much autonomy. However it has always seemed to me that the more distant forms of distant education are best suited for the more highly autonomous learners. Indeed, the learner is compelled by greater distance to assume a degree of autonomy that might be uncomfortable in other circumstances. In the same way, the instructor in distance education is compelled to assume a more ancillary and supporting, helping role. When the teacher prepares instruction for a correspondence or television or computer course, it is with the intention that the material will meet the goals established by learners and will be used as they go forward to achieve their goals. But whether the material is used remains outside the teacher's control. And the decision depends almost entirely on the worth of the material in the program. Distant learners literally turn on to the material that meets their goals, and turn off that which does not. In the same way, where in face-to-face education the teacher tends to dominate the evaluation process, in distance education it is much more common for learners to maintain control of the evaluation. Frequently, learners stop work on a course before its formal completion, causing educators to worry about "drop-out," while in fact, the learners have simply achieved their own personal objectives.

Garrison and Baynton cite Chesterton who stated that the characteristics of distance education affect learner control by a tendency to shift the focus of curriculum decision making more toward the institution and its staff, and thus away from the students. (Chesterton,1985, P33). But this is exactly the problem we encounter when we think of distance education in absolute rather than relative terms. The extent to which learners or staff have control,or the extent of learner autonomy varies according to the DEGREE of distance. When there is little dialogue and little structure, and distance is low, there is little likelihood of the staff controlling the learner; when there is a high degree of structure and dialogue, the likelihood of staff control increases. It is essential always to conceptualize the interactive relationship of these three variables, and also their qualitative, non-absolute nature.

Garrison and Baynton go on to expound the importance of the student having the power, or ability, to exercise independence and having support from peers, teachers and others. They also examine the effect of dialogue and structure on learner control, or as I would say autonomy. My only criticism of this contribution is their making independence a subordinate concept to control. It is true that independence is influenced by power and by support, but it is in an inverse relationship to control. As Control increases, so autonomy decreases and power determines whether the teacher/institution has control or the learner. Similarly learner support is likely to lead to increased learner autonomy and decreased teacher control, though not necessarily, since it can lead to emotional dependence on the source of support.

Garrison and Baynton make good contributions to understanding the relationship between various elements of structure, such as pacing and the negotiation of objectives; dialogue, which they describe as frequency and immediacy of communication, and autonomy. For example, it becomes apparent that the greater the pacing, the higher the structure, the lower the autonomy and the greater the teacher control. In general, Garrison and Baynton have provided valuable insights into the autonomy dimension of distance education. They have helped fill in some of the open spaces in the conceptual map with their ideas about control, power, and support. There is room for further and improved articulation to the Two-dimensional framework, and if this can be achieved it is likely to open up more areas for future exploration.

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One of the best of recent efforts to develop the two-dimensional theory has been that of Farhad Saba, a professor of educational technology at San Diego State University. Saba has confronted the problems presented to distance education theory by interactive telecommunications and expanded the concept of transactional distance by using system dynamics(Saba, 1989). Through this methodology he has produced a fine model of the dynamic inter-relationship of dialogue and structure. He refers to "integrated systems" of telecommunication media and explains that maximization of dialogue via integrated systems minimizes transactional distance. He proposes that a significant feature of integrated telecommunications is that it achieves what he calls virtual contiguity by sight and sound, as well as by sharing and exchanging printed documents. This virtual contiguity more than equals face-to-face instruction. "Sharing and multitasking intensify voice and sight dialogue beyond face-to-face communication.----it enables the teacher to respond to the needs of the learner by accessing a variety of information sources and making it expeditiously available to the learner." (Saba p33). In addition to affecting dialogue, virtual contiguity expedites optimization of structure in instructional transaction. This is achieved by minimizing the time delay betweeen the act of teaching and the act of learning. This process occurs in communication between learner and teacher, and it determines the required level of structure in transactional distance. Integrated systems provide a flexible means for decreasing structure through increased dialogue. They also expedite increased structure so dialogue can be kept to a desirable level. Saba has made a major contribution by discovering the extent of the dynamic relationship between the level of dialogue and the level of structure and displaying this as a negative feed-back loop in a system dynamics causal loop diagram.

He explains the working of the diagram as follows:

> " As dialogue increases, structure decreases, and as structure decreases, dialogue increases to keep the system stable. -- In a plausible scenario, the need for decreasing structure is communicated to the teacher. Consultation automatically increases dialogue; then adjustments in goals, instructional materials, and evaluation procedures occur and the learner achieves the desired level of autonomy" (p35).

I do not want to give the impression that Saba has said the last word on the interrelationships between dialogue, structure and autonomy, since he has not and would be the first to agree that his model is in an early stage of development. It is an outstanding example of the power that can be brought to conceptual analysis of distance education by the application to distance education theory of a model derived outside the field itself. The result is an increased elegance of explanation of the phenomena of interest to us, and the revelation of numerous new relationships among variables.

This is exactly what is needed for the further development of the theory of distance education. We do not need any more repetition of naive descriptions of the variables that distinguish the field. Those who make such repetitions, especially by merely changing the labels attached to these variables do a disservice by the confusion they cause. The time for such labelling and describing was the early 1970's. Now is the time for the infilling of the theoretical spaces, most especially through the generation of hypotheses and empirical testing. Our field of study does not come of age, or get the serious attention it needs and deserves until we move decisively to empirical testing of specific variables and the relationships among them. While theoreticians have suggested hypotheses for empirical research, it is now becoming critical that more students and scholars in education take up these opportunities. Empirical research should be better grounded than it has been in theory. The development of a successful symbiotic relationship between the two endeavours is in the very best interests not only of the researchers themselves, but ultimately of practitioners and learners also.

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ICDE/OU STUDENT SERVICES CONFERENCE

CAMBRIDGE SEPTEMBER, 1989

INTERACTION AND INDEPENDENCE: STUDENT SUPPORT IN DISTANCE EDUCATION AND OPEN LEARNING

VIRGINIA NILLSON

Voluntary Academic Assessment to Enhance Independent Learning

ABSTRACT

Athabasca University's Learning Assistance Program provides the opportunity for the adult learner to balance independence and interaction in the pursuit of student success. The adult learner is defined as an independent consumer with certain needs for interaction. The challenge for student support services is to determine what the needs are, develop programs of interaction to meet the needs, and then to advertise and promote such programs so as to reach those students who can benefit from them. Athabasca University's Voluntary Assessment Program enables students to pinpoint their academic strengths and weaknesses with reference to post-secondary level study and Athabasca University courses. Personalized feedback prescribes materials and programs to upgrade their academic skill levels and to enhance their success as students, but the ultimate responsibility for student success is left with the students.

STUDENTS AS INDEPENDENT LEARNERS

Just a quick look at the adult education literature points out that adults are independent learners (Athabasca University, 1988; Daloz, 1986). Independent learning does not necessarily mean, or even imply, distance learning. Students in any learning environment are learning independently. Indeed, the human brain never ceases to learn (Knox, 1977; Smith, 1989), and is doing so all the time. In many ways students can be thought of as consumers rather than as objects of interventions. Education is definitely not an intervention. It is not something which is done to people. The students make use of, they consume, what the educators make available. Educators in both the content areas and the student support areas are responsible for directing, enhancing, and reinforcing the learning which is going on in their students all the time, but they do not make it happen.

When students start assuming the direction, enhancement, and reinforcement of their own learning then they are taking on the role of the educator as part of their learning process. This assumption of an educator role is one of the characteristics of an active learner. Some students are better at the dual role of learner and educator, at being active learners, than others. The professional educators, in the faculties and in the student support areas, need to encourage and to help students acquire control over their learning, to be conscientious consumers, to be active learners.

STUDENT SUCCESS

While the ultimate goals of educators embrace such lofty concepts as a democratic and healthy society, creativity, evolution of social norms, the advancement of knowledge, and the betterment of mankind (Brookfield, 1986), the real, more immediate goals include imparting information (content), directing learning (priorities, prerequisites), and establishing paths of learning (network of content areas). These more immediate goals can be directly measured by student success. The consequent focus on student success often misleads educators (and those evaluating education) into thinking that because our goals are measured by student success that student success is therefore the educators' responsibility.

The academic faculties are first and foremost interested in imparting information. The faculties owe it to themselves as well as to the students, to their colleagues, and to their content areas to be effective in what they do. Teaching, instructing, or educating, is more than just writing down or reciting information. Telling a story guarantees only that sound impinges on another's ears. But to ensure that the listener not only hears the story, but understands it, remembers it, and uses it, the story teller must stimulate the listener. The faculties are the story tellers. They must stimulate their listeners, the students, by asking questions, by probing, by listening to what the students do with the information, by discussing, by drawing out the students (Brookfield, 1987).

The faculties do not have to be concerned about whether students know why they are taking courses, are in the right courses, have appropriate or adequate academic backgrounds, or need help with study skills. Some forms of student support can be imbedded in the curriculum. Course materials can include suggestions for how to approach the material, or include directions to refresher material, upgrading information, and self-tests to assess readiness for the material. The academic faculty can try to help students directly, either individually or in classroom groups. Such attention to these issues can bring rewards in the form of better students, students who consume more, and students who make teaching more fun. But the faculties' primary concern is to excel at imparting information in ways which stimulate the student. Student success is not their primary responsibility.

Just as student success is not the faculties' responsibility, neither is it the responsibility of student support services. The support areas of education devise, advertise, and present ways to learn more efficiently. They may impart information too, but the emphasis is on helping students direct themselves and select suitable paths of learning. The goal of student support services is the continual development of independent learners into better, more efficient learners. Again, this goal is measured by student success.

Ultimately, student success is the students' responsibility. Students must listen, understand, question, analyse, and apply what is being taught. And they must motivate and direct themselves.

INTERACTION

A possible interpretation of our conference title is that interaction and independence are at opposite ends of a continuum and that students can move away from interactive learning toward being more and more independent learners. But is one the opposite of the other? With student support services do students move away from interactive learning situations and become more independent learners? Are face-to-face learning situations interactive while distance learning situations are independent? Do the terms interactive and independent characterise mutually exclusive learning styles? Are these complementary learning styles? Is one better than the other? Not at all; the answer is no to all of these questions (Kidd, 1971; Knowles, 1980; Rogers, 1969).

Then what is the relationship between interaction and independence? Is interaction necessary for learning? When should interaction occur? What form should it take? What are the goals and objectives of interaction? How do we evaluate the benefits to independent learners of interaction?

The interaction in the conference title refers to support services for helping students be successful students. The questions posed are more difficult for distance education to answer than for traditional, face-to-face education because of the limited opportunities for spontaneous interaction between students and the institutions. To begin to answer these questions support services must look at the needs of the students, both their own perceived needs and those which education itself imposes on them (Sork, 1988).

Athabasca University has determined that students need information and direction with respect to their levels of academic skill when beginning or returning to formal post-secondary study. Some students perceive this area as one in which they have needs. Others begin to recognize that they need help in this area as a result of advertising and promotion of programs developed to address this need.

Athabasca University has developed a program to help students assess and improve their academic skills in the areas of writing, reading, and mathematics. The students' use of this support service is the interaction in the conference title. This is the sort of interaction which is reported in the literature as a variable in student success (course completion and student retention) (Brindley, 1987; Pascarella and Terazini, 1979; 1980; Tinto, 1975). The interaction has to happen at the right time, when the students want it, and its content must match the students' needs. If the opportunity to interact is available at the wrong time, or if it is imposed without the students realizing the need, or if the content is not what the students need, they either will not partake of the interaction, or the interaction will not benefit them in any way. They will go away from the interaction thinking THEY have failed, and they might not come back, while, in fact, it was we, and our support, who failed them.

AN EXAMPLE OF INTERACTION AT ATHABASCA UNIVERSITY

Athabasca University's Voluntary Assessment Program is one of many potential interactions available to support independent learners Because of its voluntary nature it is not an intervention, but rather, it fits into the student-consumer model. The program is advertised and promoted so as to reach those students who can benefit from the program; who both need it and want it. The advertising states as clearly as possible what benefits can acrue to the learner as a consequence of the interaction. Before tests are given to students the counsellors make every effort to insure that the students understand the tests' purposes and limitations. For those tests which involve counsellor feedback these cautions are further emphasized by the counsellor when giving the feedback. An ever-present danger of most tests is that students will misunderstand the purpose or the results. This danger is magnified in situations where information and materials are provided for the students' use according to their own purposes and for use at a distance. We must recognize the potential for misinterpretation and try to avoid it.

The Voluntary Assessment Program serves as a 'gate' into Athabasca University courses, not only for beginning students and first time registrants, but for all Athabasca students. Suitable assessment tests can enable students to determine for themselves if they are academically prepared for Athabasca courses. The voluntary nature of the program must be stressed so that it is not seen as conflicting with the University's open admissions policy. Test results can be used as a form of advice for students to consider based on their specific skills. Students are given direction, after they have obtained their results, about what to do or where to go next, whether they have the requisite skill levels for particular courses, or if they belong somewhere else. Feedback includes basic refesher material relevant to their weaknesses. This assessment program does not provide remedial, basic, or developmental instruction or upgrading. The Voluntary Assessment Program focuses on three basic areas.

Writing - With Athabasca University's Diagnostic Writing Test students can determine their writing skill levels with respect to the university standards in place in the Province of Alberta. They can obtain assistance with setting up their own individual program of writing improvement based on their test results. The Diagnostic Writing Test is available on request to registered Athabasca University students. The test is self-administering and instructs the student to write a 400-word essay on one of four given topics in approximately two hours and with no outside help or resources. The essay is reviewed by at least two markers, once holistically and once detailed in the seven areas of content, structure, paragraphing, sentences, grammar, word use, spelling and punctuation. If the holistic and detailed marks do not agree the essay goes to a third marker. Student Services counsellors initiate either face-to-face or telephone feedback, and this is followed up with a print-based feedback package which is sent to or given to the student along with the marked essay. Feedback includes attention to strengths and clear explanations of areas which need improvement. These explanations are cross-referenced to the comprehensive annotated bibliography included in the feedback package. Whenever possible and appropriate referrals are made to local resources.

Reading - The reading assessment test determines ability to comprehend english prose using a standardized reading level test widely used in North America (Degrees of Reading Power). One of the unique features of the Degrees of Reading Power (DRP) test is its complementary capability to do difficulty-level analysis of any prose material. Licensed software provides the means to determine the difficulty level of any materials, including Athabasca University course materials. With this information students' reading scores can be text-reference. That is, students can be told how their reading ability compares to typical Athabasca University course materials levels (or any other prose material in which they may be interested).

One of the ways that this test is promoted is by doing a difficulty-level analysis of articles appearing in Aurora, the Athabasca University magazine which all students receive every three months. A brief note accompanying any article analyzed tells the reader what the difficulty level is, in DRP units. Readers are referred to the Voluntary Assessment Program advertisement elsewhere in the magazine. The advertisement gives further information on what DRP means and how students can use the DRP information by doing the Reading Assessment Test and determining their own DRP levels.

Mathematics - With the Math Skills Questionnaire (MSQ) students can compare their level of math skills against those required in certain Athabasca University courses. The MSQ is not a standardized math aptitude or achievement test. The instructions try to make it very clear to the students that the test can be used only as an indicator of whether they are able to do the math which would be required of them in the courses it identifies. When counsellors recommend the MSQ to students or actually give it to students this caution is stressed, too. Because the test is self-scoring there is no other opportunity to guide the students in their interpretation of their results.

The package includes an explanation of the test, its purpose and its limitations, and instructions for completing the test. The test itself comprises four sections of questions. Each section is relevant to different Athabasca University courses (math, accounting, and chemistry courses) and tests the math skills necessary to study those courses. An accompanying answer booklet provides very detailed, instructional solutions to all of the questions. The annotated bibliography refers students to prescriptive materials available from Athabasca University's library and in the Learning Resource Centers in Athabasca University's Regional Offices. The bibliography is categorized according to the various subject areas tested and is cross-referenced with the solutions in the answer booklet. The MSQ serves as a basic math refresher for some students, and gives direction for skill improvement. It is available on request to registered Athabasca University students and is self-administering and self-scoring.

SUMMARY

By acknowledging that adults are independent learners and by locating the responsibility for student success squarely on the student we can consider students as consumers. Try as we might, we cannot educate unless the students want to, and know how to, learn. Educators provide opportunities for learners to improve their consumer behavior. Support services assist the learners to be better at what they are doing and help them become more active learners. Active learners are those who are in control of their consumer behavior. Although the quality of support services is gauged by various measures of student success, the support services are not responsible for making students successful. Rather, they have the responsibility to prompt students to recognize or determine what their needs are (Brookfield, 1986), to assess students' needs, to develop and have available for consumption whatever is necessary and within their means and mandate to fulfill those needs, and to make sure that the students whose needs they can fulfill know what is available and how to make use of it.

One of the ways in which Athabasca University helps its students to be better consumers, independent learners, and active students is by means of a voluntary academic assessment program. Interaction in the form of diagnostic tests with accompanying individualized prescriptive advice and information enables students to identify and strengthen their academic weaknesses.

WORKSHOP

In distance education student interaction with support services is more apt to be by means of print, electronic media, or telecommunication than in traditional, campus-based education. It is infrequent, often unscheduled, usually at the students' discretion rather than the institutions', and only occassionally face-to-face. We need to be concerned about whether these are effective ways of interacting. Athabasca University statistics show request rates for and qualitative student feedback information from three academic assessment tests. Tracking of students who have requested these tests looks at course completion rates and subsequent registration rates (two typical institutional measures of student success) compared to the institutional rates for all students. Details of this evaluative information as well as samples of the tests, the feedback, and how test results are interpreted to students will be presented in the workshop.

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Do Open Universities Do a Better Job of Developing Independent Learners?

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NOTE: This paper is prepared for "Interaction and Independence: Student Support in Distance Education and Open Learning", the OU/ICDE sponsored conference in Cambridge, England in September, 1989. If one were to select a group of independent learners, one would assume that the collection of highly educated individuals attracted to this latest in the series of Cambridge conferences would score very highly in this domain. Prior to this presentation, conference participants will be asked to participate in "Spot the Open Learner", a new game intended to explore the relationship between open universities and open learning.

My starting premise is that one of the central goals of a university education, whether or not explicitly stated, is to develop independent learners. This is not an absolute concept, but a notion that those graduating from a university programme should be expected to be more "self-sufficient" learners than they were at their point of entry. It involves changes in values (openness to new ideas and to rethinking current beliefs), attitudes (self-motivation) and the development of new skills (time management, study skills, problem conceptualization, critical and lateral thinking, research and library skills).

I stress that this is a goal of all university programmes, not just those in so-called "open learning" institutions, although it may be a more explicit goal of the latter. Whatever the case, I mean to challenge any self-congratulatory tendency we have for suggesting that open universities necessarily produce learners who are more independent.

knows what he or she wants to learn and how to go about learning it. This is not to suggest that all learning is premeditated, for presumably the truly independent learner is always receptive to the unexpected, taking advantage of it to learn new things or ways of viewing the world. The dependent learner, on the other hand, is more apt to want to be told what to learn and how to learn it and less apt to go beyond the minimum demands of a particular assignment, to challenge its usefulness or to apply what has been learnt more broadly. The essential difference, after Dewey and Whitehead and as discussed by Boot and Hodgson (1987), is between knowledge as a process and knowledge as a commodity.

One of my central tenets is that, while open universities may be particularly well suited to independent learners, they do not necessarily have anything to do with developing them. Athabasca University (AU) provides an interesting case study here. The main support that it provides for its students is the opportunity to pursue formal university studies in their own time and pace (starting any month of the year), in their own place via homestudy, and, to some degree, in their own way through a variety of course delivery options.

AU's open admissions, self-pacing and homestudy offerings provide already independent learners with the opportunities and flexibility they require to complete their studies. The student profiles read out at its annual convocation, which present an amazing array of learners who have overcome all sorts of obstacles to learning, underlines the independence of its graduates. Such students would succeed in any university, given the opportunity, and I would admit, somewhat ruefully, that they sometimes succeed despite AU (when they have to overcome problems of course availability, slow service or bureaucratic barriers). Hence, while the university is justified in taking credit for the opportunities it has given these individuals, it may not have been so instrumental in their development as learners.

The true test, then, is what universities do for students who do not possess such obvious independence when they first enrol. There is room for concern, here, regardless of the type of institution.

In conventional, campus-based universities, especially in North America where the emphasis is usually on taking a wide range of courses for credit, students may not be particularly encouraged to develop their independent learning skills. Instead, their skill development is too often in the direction of learning to play the "university game", circumnavigating the true purpose of their courses of study through such shortcuts as developing acronyms to help them remember facts they are supposed to regurgitate[1] or "casing" the probable questions on the examination by reviewing patterns in exam questions over the past 10 years and only studying the 35% of the course most likely to be on this year's. This tendency to treat education as the dissemination and repetition-on-demand of a fixed, unchanging entity called "knowledge" is all too prevalent, especially in very large first and second year classes on crowded campuses, where the "transactional distance" (Moore, 1983) may be even greater than it is for some homestudy students. Other manifestations of this approach are the multiple-choice examinations so favoured by psychologists and the awarding of degrees for collections of credits with no requirement that students demonstrate an ability to integrate and to apply what they have learned on an overall basis.

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[1] I still remember "BOMDAS", which gives the order of priority for mathematical operations -- brackets, "of", multiply, divide, add and subtract -- and some rather obscene ones I used for such questions as the seven causes of this or that revolution, in itself the kind of question which reinforces dependent learning.

On the other hand, on-campus students may be encouraged to move quite dramatically along the dependent-independent continuum. An inspiring lecturer, a really good discussion or stimulating reading or, as is so often the case, serendipitous exposure to the ideas of fellow students may motivate the individual to pursue a particular issue in depth and way beyond the demands of a course. This, in turn, will require the development of research skills and may inspire new interests which change the way that the individual looks at the world. Especially for students in residence or active on campus, the interactive atmosphere and freedom of full-time study may be very stimulating in changing their attitudes towards and capacity for learning.

Do open universities do more to promote independent learners than campus-based ones? Other than providing more opportunities for adult and part-time learners, open universities may in fact do less. For example:

1. The prepackaged course materials, especially if handsomely and

permanently printed and bound, may carry undue authority for many students. Wolfe and Murgatroyd (1979) have written of the reification of knowledge associated with this process.

2. Because they are highly visible to academic peers as well as students, courses tend to be overly heavy in content. This may also encourage students to focus on digesting the contents rather than focusing on its meaning and application.

3. Courses tend to be built around prescribed and supplementary reference materials. While this is logical for and helpful to isolated homestudy students, it does not encourage them to search out their own sources or to develop library skills.

4. While most open universities provide access to tutors and even seminars in support of homestudy courses, students usually lack the immediacy of feedback that comes from more regular and concentrated interaction with other students and staff and hence are less apt to develop the inclination to challenge or question what they read.

Graphic representation of the difficulties faced by students confronted with the demands of homestudy, at Athabasca University at least, is the high attrition rate for first time home-study students. About two-thirds do not complete their first course and the great majority of these do not get past the first unit. We call these students "non-starts" and have put considerable time and energy into trying to encourage them to persist.

Other than paying more attention to the design of first units of first year courses (easier content, more immediate quizzes and feedback on student progress), our efforts in this regard mostly involve providing better services, including more frequent contact with tutors; more local and regional access to information, orientation, advising and counselling services; remediation and skill development; and a proliferation of delivery modes which provide increased interaction with staff and other students.

In other words, the university has tried to emulate an idealized vision of what goes on on a traditional campus in providing more support to its students. However, because we know so little about how people learn and because of the overwhelming influence of personal (as opposed to institutional) factors on a student's performance (*Brindley, 1988*), this exercise still comes out as a roulette game, an expensive hit-or-miss approach which has a marginal impact on completion rates but perhaps at the expense of the cost-per-student (if not the cost per completion).

However justified this reaction, and I have argued strongly for it elsewhere (Paul, 1985, 1988), it may not be doing very much for the development of independent learners. Furthermore, in the face of more competition for scarce resources, student support programmes may be undermined by a counter tendency to tighten up regulations and to reduce services in tougher times when the more conservative and traditional elements tend to be emphasized.

Developing independent learners is more than an important educational value, however, for it may also be justified in economic terms on the assumption that such students make fewer demands on the institution. They may complete courses and programmes more quickly and require less tutorial and counselling help in working their way through the courses. If the ideal student is one who ultimately outgrows his or her teacher, the ideal open university is one which breeds students who no longer need its support.

This is not to decry the cost or importance of student support services. On the contrary, they are an essential component of an open admissions process if the open door is not to be a revolving one (Paul, 1985). However, they would be much more effective if we could learn more about identifying individual learning styles and hence do a better job of matching service to individual need. The challenge is to provide early support (rather than crutches) and to wean students from support services as they proceed through the institution.

There are many teaching analogies. Few people will learn how to swim if they are thrown in the water without instruction or support or how to ski if put on a steep hill and told to make their way down. On the other hand, experience has shown that individuals can learn to swim or ski much more quickly than some of the earlier teaching methods had supposed. This suggests an individualization of learning which may be more expensive in the short run but which should produce a lower cost-per-completion in the longer run.

The challenge of developing independent learners in open learning and distance education has received some attention in the literature.

A first attempt at exploring the relationship between distance education and independent or autonomous learning was made by Inglis (1988) in Far North Queensland using a measure of "affective" learning and equating it with learner autonomy. However, despite the care he took in surveying the population, his results reinforced the wide range of individual differences and the difficulties of drawing tight conclusions about which aspects of distance education are most effective in developing independent learning.

Krajnc (1988) found a correlation between certain individual characteristics and the ability to study in isolation, one notable variable being self-esteem. Unfortunately, she found that those least apt to be successful, the ones with low self-esteem, were most apt to choose distance education. She also compared "extroverted" and "introverted" learners, extremes on a sociability scale, and found that neither extreme functioned favourably in the relative social isolation of distance education. The extroverts were quickly discouraged by the lack of social interaction while the introverts missed the sort of stimulation that they would encounter in more conventional settings from seminars and informal contact with faculty and peers.

CONCLUSIONS:

As distance teaching universities have developed and become more sophisticated, especially in dealing with the very real challenge not only of admitting learners but producing successful ones, they have had to focus more and more on the kinds and variety of student support offered. While these have tended to increase the cost per student, they have been justified in terms of reducing the ultimate cost per graduate (or completer).

Increasingly, however, we should be asking whether the mere fact of completion is sufficient. Are we producing self-actualized learners who will live up to the ideals of life-long learning (which is an attitude and process more than a formal function) which we espouse? Can we be satisfied if support services help students to complete the formal requirements for credentials but leave them as dependent on prescribed course content, learning outcomes and methods as they were when they started?

The SPOT THE OPEN LEARNER game was devised mainly to compensate for being given the dreaded "after dinner" slot, but I hope that it helped illustrate the importance of this issue. While I may be at some risk in writing this before it happens, the outcomes of the game should produce some optimism -- by and large, we are a group of open learners and we are dedicated to the ideals of open learning -- but it should also give us reason to pause and reflect on what we are doing to encourage open learning among our students. Farnes (1976) has commented on the contrasting irony of staff and student experiences of the same course -- the stimulating experience of serving on the course team to develop it versus the comparatively passive experience of students working through it.

Following Boot and Hodgson (1987), we may get caught in the ironic trap of reducing the openness of learning by trying to do more to match learning style and educational delivery. For instance, a rationale approach to all this would be to:

a) encourage more research into learning styles and their relationship to delivery systems;

v) explore the relationships between type and extent of service and student dependence or independence;

c) develop entry-level tests for learner independence; and

d) on the basis of test results, develop exercises which encourage students to examine their own learning styles and hence to develop their own autonomy as learners.

e) use desk-top publishing and course design to maintain the flexibility and adaptability of courses, with frequent updates and revisions being mailed to and from students.

However, if we started testing for learning style and then prescribing the appropriate combination of delivery systems and support services, we would be belying one of the basic tenets to open learning -- leaving such choices ultimately up to the student.

The key word here is "ultimately". To return to the swim analogy, I still support allowing our would-be swimmers to jump into the water if they so choose, but only after they are fully aware of the probable consequences of that action and of the services and support available to help them increase their chances of success.

Whatever else we do, we must avoid any tendency to turn "distance education" and "open learning", significant and recent innovations, into new traditions, as rigid in their resistance to change and growth as any of the longer standing tenets of more elitist institutions. If we are to be successful in developing open and independent learners, we must ensure that we ourselves are open learners, managers and teachers first.

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INTERACTION AND INDEPENDENCE : STUDENT SUPPORT IN DISTANCE
EDUCATION AND OPEN LEARNING
CONFERENCE AT DOWNING COLLEGE, CAMBRIDGE, ENGLAND, 19-22 SEPTEMBER, 1989

Participating Paper
Theme : Distance Education in Indian Perspectives with particular reference to the North-Eastern States.

Dr. A.C. Phukan, Industrial Advisers, Jorhat, Assam India, 22 April, 1989

Introduction

India has an age-old tradition in the field of education and pursuit of knowledge. India has been and is a pioneer among the developing countries in building up a large resource base in the field of education by giving due emphasis to educational planning and establishing institutions and organising programmes for the total development of human resources. Since achieving independence about four decades ago she has established a wide network of educational, training and research institutions at various levels, covering the total spectrum of education including general, technical, vocational, professional and management education, agricultural and medical (including paramedical) education. Although not much developed , the modern ideas of distance education and distance learning are also gaining ground in India as well.

I welcome this opportunity to speak on the development and the need of this system of learning in Indian perspectives with particular reference to the North Eastern States.

Distance Education

Distance education, as the name implies, is education at a distance. But in the point of fact it is more than that, it is a way of life in many advanced countries of the world. In the next century the world's population will reach 10 billion. The challenge of providing education to such a doubled population is a formidable task. In many countries including India the present educational system can hardly keep up with the growth of population. Even primary education is not a right enjoyed by everybody in to-day's world . In the modern world, which is full of challenges and in which the changes are characterised by their magnitude and speed, distance education will become even more important in the next fifty years than it has been in the first fifty years of its existence since 1938 when the International Council for Correspondence Education was first established. As pointed out very succinctly by the Prime Minister of Norway, the inherent qualities of this system of education are flexibility, adaptability, cost-effectiveness and open access [1]. It can give people access to education and educational opportunities regardless of where they live or what their life situation may be. These qualities have made this system of education suitable for India as well.

Distance Education in India

India is a relatively poor but developing country with huge population and some 80 percent of our population of more than 700 million live in our more than half a million (5,60,000) villages. That is, our rural population is about 560 million, considerably larger than the total population of any country in the world except China.[2] There are diverse races and culture in the country and the total effect is that of unity only in diversity. To educate these huge mass of people is a tremendous task and the existing conventional system, in spite of trials at every detail, has failed to yield the desired results although for such enterprises the literacy in the country has increased from 14 percent in 1974 to 36.23 percent in 1981[3] and the total number of literates in India has also increased from 60.19 million in 1951 to 247.55 million in 1981. There were 157 universities in 1986-87 against 27 in 1951 which number has now increased to 163 in 1988. There were 537399 Primary and 64240 High and Higher Secondary schools in 1986-87 and there were 4151 colleges during the same period[4]. The universities here in India cater to the needs of about 35,00,000 students in different disciplines, which is very low compared to the total population[5].

Open University in India

The first Open University in India was established in 1982 in Andhra Pradesh. The Indira Gandhi National Open University (IGNOU) has been established by an Act of Parliament passed on 20 September, 1985. It is the harbinger of a new system of education in India[6]. It is to serve the purpose of development of an alternative to the existing system of education by its emphasis on innovation, cost effectiveness, absence of rigidity, universality and above all, social involvement. The IGNOU aims at advancing and disseminating learning and knowledge by a diversity of means including the use of communication technology and at providing opportunities for higher education to a large segment of the population. As the jurisdiction of IGNOU covers the entire Union of India its organisational network extends to all parts of the country. There is provision for establishment of Study Centres and Regional Centres of the University.

Though the scheme of the Open University is a novel one, yet there has been no dearth of response. Until now a total of about 54000 students have enrolled in the IGNOU. To its credit, the University has been successful in extending to the villages the opportunity to obtain higher education and several individuals from rural areas have gone in for the B.A. and B.Com courses offered by the University. The University has, in the meantime, opened 127 Study Centres and 12 Regional Centres throughout the length and breadth of the country[7].

Commonwealth of learning

A significant development that has opened up yet new vistas has been the creation of the Commonwealth of learning this year. It envisages the strengthening of national capacity in distance education sharing the existing distance education materials among Commonwealth countries and helping distance teaching institutions to provide better services to students. Under the scheme, an Indian Open University student can go for programmes from any Commonwealth country. He can opt for a course produced in Canada while being enrolled in IGNOU[8]. Standing on the soil of this great Commonwealth country, I feel proud to note that it was about hundred and fifty years ago in 1836, the first ever distance education application was carried out by the University of London[9]. But the method gained popularity after 1970's . And it was again in England at the beginning of the sixties that the idea of a 'University of the Air, was introduced for the first time and ever since the establishment of the Open University in England in 1969 it has revolutionalised the concept of education throughout the globe. It is heartening to note that this University in U.K. is now offering help, collaboration and guidance to the Open University in India [10].

North Eastern India

The North Eastern Region of India is comprised of 7 States popularly known as the seven sisters. The following table indicates the salient details about the Seven-Sisters that make out this area [11].

Geopolitically, North-Eastern India is very important. No other area in the country occupies such a strategically important position as this region. It has international boundaries on four sides with four different countries, China on the North, Bhutan and Bangladesh on the West and Burma in the South-East. The frontier areas are inhabited by the tribals who had not been touched by the national movement. There is immense diversity in the region, the like of which we do not find anywhere in the world. It is a polyglot area in which we find all races, religions and languages. ' Hetero-geneity is no doubt beautiful but diversity is a divisive force and creates problems which cannot be solved easily [12]. Nevertheless, such problems are to be solved in national interest. For this proper education is necessary. It is important to ensure that all our local communities, as far as possible, are offered equal educational opportunities. Priority has to be given to the maintenance of a high-quality decentralized system of primary and secondary education as part of a policy to strengthen and develop local communities.

TABLE
AREA AND POPULATION OF NORTH EASTERN STATES IN INDIA

STATES	AREA IN Sq. Km.	POPULATION IN 1000			DENSITY
		TOTAL	MALE	FEMALE	
Assam	78,523	14,625	7,714	6,911	186
Manipur	22,356	1,073	542	531	48
Meghalaya	22,489	1,012	521	491	45
Nagaland	16,527	516	276	240	31
Tripura	10,477	1,556	801	755	148
Arunachal	83,578	467	251	216	6
Mizoram	21,987	332	171	161	16
Total	2,55,937	19,581	10,276	9,305	76

Planning for development

Planning for future development is an act of faith and more so is the case with educational planning. India's North-East requires proper planning for educational development for more reasons than one. We have to keep in mind that India is a poor country with per capita annual income of Rs.2721 compared to the average of Rs.31,431 in the world. In the North Eastern India about 52 percent of the people live in villages and live under poverty line and about 11 percent of these people are tribals of various castes and for these people education is a luxury which they cannot afford to acquire[13]. For this reason the lowest literacy rate of 20.79 percent in India is recorded here in the Arunachal Pradesh compared to the highest Indian rate of 70.41 percent in Kerela State [14]. In the tea garden areas of Assam alone there are more than a million illiterate people who are in need of education to lead a normal progressive life[15]. The various adult education and workers' education centres in the region are rendering yeoman services but these are not enough compared to the gigantic nature of the problem. The expansion of the Open learning system may bridge the gap in these hitherto backward areas of the nation.

The learning system

Of the three elements that constitute the learning system the students, the faculty and administration and management, the last two exist primarily to educate and serve the first element. That is, the primary objective of the system is to cater to the needs of the student community, their education, growth and welfare. And who are the students here in the North Eastern India ?. They are the vast mass of almost illiterate persons living below the poverty line in most cases. The Open learning system will be rightfully earning a golden place in the annals of mankind if we can motivate these people atleast to learn the basic primaries of life through constant enterprises and useful practices.

Although just being 'rural' need not be a 'problem' it certainly is a problem and a major one in our country and more particularly in the North Eastern region. It is a problem because the vast mass of illiterate, ignorant peasants live in huts, hovels and sub-standard dwellings, devoid of any basic sanitary or hygenic necessities, not to speak of any modern amenities like electricity, running water etc. The environment of the average village is depressing, the streets narrow, crooked and unpaved; and the total picture from the public health point of view is one of filth and squalor. The problem is unique in its own way and is quite unimaginable in a developed country. But education has to look after the needs of these millions of people and the actual success of the Open learning system will be gauged only through its performance with these people alone.

The educational set-up

There are more that 32000 Primary Junior Basic schools, 6000 Middle and Senior Basic Schools, 3900 High and Higher Secondary Schools and 267 Colleges for General Education in this region which look after the conventional system of education[16]. Compared to these, there are seven universities in the region namely, Gauhati University (1948), Dibrugarh University (1965), Assam Agrucultural University (1969), North Eastern Hill University (1973), Manipur University (1980), Arunachal University (1985) and Tripura University (1985) which cater to the needs of higher education in the region[17]. But these institutions and the Universities have not been able to deliver the good. In these universities there are practically no distance education facilities although the University in Guwahati has now been taking some interest in this behalf. The Indira Gandhi National Open University, with its existing 7 study centres and two more proposed at Dergaon near Jorhat and another at Tura in Garo Hills may yield results but this will not be sufficient. The IGNOU, as stated earlier, has already set up a number of Regional Centres in the country and it wanted to set up such a centre in Guwahati in early 1987. The Assam Government wanted this centre to be established at Hawaipur in Kheroni of karbi-Anglong district which proposal was, however, not accepted by IGNOU authorities and thus the Regional Centre has not so far grown up in Assam and for that matter in the North Eastern Region although the list of projects and institutions proposed under clause 7 of the famous 'Assam Accord' ending the six-year old student movement, envisaged the establishment of such a centre in the State[18]. In spite of the political motivations behind such decisions of the State Government,the Centre is required to be established in a central place like Guwahati in Assam for the development of educational facilities in this part of the country.

The Real need

Whatever be the present standard and whatever be the argument to the contrary it is certain that education is the major key to the development of rural India including its more backward North Eastern States. Education of rural youth and adults of both sexes is the real answer to the miserable plight of our backward rural millions. This is certainly not the type of education that we have been imparting to the students of our country for the last century and more in our high schools and colleges. We, in fact, need some type of institute to educate our rural people in particular. Such institutes are called Rural Institutes in Taiwan, Mexico and elsewhere. We may perhaps call them Rural Universities, a very broad based open learning institution designed for rural India and located in a rural area, serving a stipulated number of villages around the University. This can either work indepedently or in collaboration with the National University in the country's capital. There should be no pre-requisites of any kind, academic , age, sex or otherwise, for admission to these universities beyond a desire to learn. The unique feature of this learning system will be that it will effectively bridge the gap between teaching theory and the practical work. The proposal may sound utopian ; but this is the need of the hour and the country cannot afford to miss it.

Voluntary Organisations

The working of the various voluntary organisations in the country may be channelised to impart real need based education in the above directions. There are number of volunary organisations and private institutions imparting education through correspondence courses. From the Norwegian experience, where there are 4 million people but 12 million members of such voluntary organisations,[19] these institutes may serve well in the North Eastern Region as well. These organizations are a vital force in the development of democracy and they provide channels for participation and influence in workings of society. The IGNOU is poised to transform the whole system of distance education in India when it leads to the transformation of all institutes of correspondence courses into open universities. The IGNOU is to form a network of such intitutes and any correspondence course that has to be started will require the sanction of the IGNOU. The IGNOU, in fact, is to be a sort of University Grants Commission (UGC) like body for the open universities in India .

Educate Women for development

One most important aim of education is to educate women for development. In the matriarchal type of society, specially in the Meghalaya, more than fifty percent of the workforce are women and so is the case with the tea gardens of the region where female workers constitute more than fifty percent of the total workers. They need education for general progress and social growth. In the North Eastern part of India women in the tribal societies, fortunately, do not suffer from the disadvantage suffered by women of the traditional Indian society. Women in the tribal societies are taking advantage of the educational systems as they have no social constraints in getting themselves educated. One of the major consequences of the varied process of change operating in N.E. India has been the emancipation of women from their tradition bound ethos. Increasing geographical and occupational mobility and the emergence of new economic patterns are mainly responsible for this trend. We may cash on this new trend to educate women for social development and here again distance education has to play its part.

Overview

But initiatives must come from within. popular support to the developmental plans is necessary at all levels for achieving the goal. Education in the modern world is widely expansive and it has many dimensions. A wrong system of education and undigested learning will do more harm than good to the society in the long run. It would, therefore, be in the fitness of things to find out the most apt and suitable courses and study materials for the North Eastern States in particular in view of the society here characterised by multi-racial and multi-lingual population ; utmost care has to be exercised for encompassing all the sections of the society under the educational programmes so as to ensure social justice to each group of people in the true spirit of the Constitution of India in order not only to ensure economic development but also to promote national integration. Needless to say, the multilinguistic character of our society would entail preparation of educational materials in all the allied languages and that in respect of various courses of study. The financial requirements would, therefore, be manifold.

In the context of language, it is pertinent to point out that the educational programmes launched through the help of INSAT-IB by the U.G.C. are largely in English and Hindi languages. While the population in the North Eastern States suffers from lesser coverage having only one radio set per 645 people and one T.V. set per 20,269 people[20] they also suffer from the problem of language. More importantly, the low paying capacity of the people hamper the initiation for learning activities at a massive scale since the response from the community may not be desirably high due to income constraints. Moreover under the existing federal arrangement, the major responsibility for development and maintenance of education falls under the purview of the States and the North Eastern States having suffered from special constraints education here is not much developed compared to other Indian States. Although the role being played by India's successive five year plans has been noteworthy and although the specific aim of human resource development through literacy and training programmes has been duly emphasised by all the Five year Plans including the Seventh Plan (1985-1990) the achievements so far, particularly in respect of the N.E. States are not very bright. What we feel is that while the emphasis on improvement of quality of higher education through educational T.V. should not be underated, the question of quantity as well as equity in providing education across the various socio-economic groups should not be ignored, lest the existing social and economic inequalities should get aggravated. This is a major challenge particularly in the North Eastern India which ought to be tackled effectively through the use of educational technologies and well conceived plans for promoting distance learning system in which enterprise co-operation and goodwill from all concerned are extremely necessary .

We can perhaps depend on two recent British initiatives that exemplify what is sometimes called 'The Training Revolution' and which increasingly make use of Open Learning. We note that Open Learning is a flexible cost-effective way of organising training to meet individual needs. In view of the illiteracy and poverty of the people in this region continuing education has to be part of the answer. Once 'reached' and motivated, especially by success, these adult learners stay 'reached' Like Oliver Twist, they will come back for more[21] . In tune with the young musicians of Oslo welcoming the delegates during the 14th World Conference we can say :

'Distance education is what we have to work for

bring knowledge, words of wisdom
to every single door
to every little cottage,
wherever people live
bring knowledge to people
like golden leaves are
spread by wind ....[22]

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REVIEW OF PREVIOUS RESEARCH INTO SUPPORT SYSTEMS

Coldeway et al(1980) raised issues concerning the support of open/distance learners at Athabasca University but did not follow through by fully implementing the results of their research. Rouse(1986) reported upon a survey of 300 students at the National Extension College shortly before his death. Clarke et al(1985) reported to the then Manpower Services Commission on the strengths and weaknesses of a number of open/distance projects but did not produce a strategy for improvement. Rekkedal (1985) found that students were reluctant to contact the administration, tutors or counsellors when they had difficulties. Lawrence et al (1988) are looking at the use of learning materials by the nursing profession, regrettably the support systems have not been dealt with in any depth during the interim phase of their research.

THE NEED FOR FURTHER RESEARCH INTO SUPPORT SYSTEMS

A survey by Hodgeson (1986) found that most open/distance learning research had placed undue emphasis on learning materials and not enough on the educational process of which they are but one component.

King et al(1980) found that, because there had been a significant improvement in the quality of learning materials it is tempting to believe that the learning material is the only important element in a successful system. They also stated that, in the opinion of the authors, the quality of both the materials and the support systems are critical to the success of a distance learning system.

Daniel and Marquis(1979) were concerned that, as interactive activities are expensive, their effectiveness should be examined regularly.

Feasley(1983) stated that student support services for distance learning needed further study.

Paul(1989) implied that changes to the support systems at Athabasca had been implemented piecemeal, each change resulting in improved results, it is now time to look at the changes that have been made and relating them to modifications in both materials and support systems.

SUPPORT FOR OPEN AND DISTANCE LEARNERS

Anthony Prideaux

Plymouth Polytechnic

Marshall(1986) states: "*to be successful an open learning delivery system must efficiently deliver* ***high quality*** *learning materials to satisfied students at an* ***economic cost.*** *You have to evaluate each of these areas objectively and look for ways of improving your performance based on this evaluation. In simplest terms you inspect:*

- *how well you have* ***delivered*** *the materials to the student,*
- *the* ***quality*** *of the learning materials,*
- *the* ***support*** *provided to the students,*
- *student* ***performance,***
- *the economic* ***cost*** *of providing the course,*
- *student* ***satisfaction***

You should look at each of these areas in isolation then you should look at how they interact."

It is the contention of the author that the effectiveness of the support systems of open/distance learning, particularly non-advanced and work-based open/distance learning, have not been adequately evaluated. It is also contended that large scale evaluation of support systems using qualitative methods could suggest strategies that could improve learning, reduce drop-out rates, give more satisfied customers and result in greater cost-effectiveness.

INTENDED PROGRAMME OF RESEARCH INTO SUPPORT SYSTEMS

After the completion of an extensive literature review, and taking into account the widely scattered target population of open/distance learners, three research methods will have to be used to gather the required information, these are:

- Questionnaires
- Interviews
- Observation

The first two methods have already been used successfully in the pilot study carried out on the Seafish Open Learning Project by Prideaux (1989), providing satisfactory data on individual open learners who were studying at a distance from the delivering organisations. The third method would mainly be appropriate for groups of learners in the workplace, or for group tutorials in learning centres.

The first phase of the research will involve identifying the support systems used by each of the co-operating learning systems. This will be achieved by visits to the appropriate administrative headquarters, followed by visits to the support centres themselves.

After the study of existing support systems has been completed, a database containing information about the strategies involved and their users will be developed. Using this data it will be possible to:

- Produce, pilot and distribute questionnaires
- Design, and pilot interview checklists
- Design, and pilot and an observation strategy.

The information gained from the completed questionnaires and from tutor and delivery system records will then be used in:

- Production of a database listing the support strategies used by each organization
- Selection of suitable individuals and groups for detailed investigation using interview and observation techniques
- Collection of data by interviews and observation

The final phase of the research will comprise:

- Analysis of the data obtained from interviews and observation
- Comparison of the effectiveness of the support systems under investigation
- Piloting and introduction of modifications to support strategies if found to be needed.

ORGANIZATIONS PARTICIPATING IN THE RESEARCH

The following organisations have so far agreed to co-operate in the research programme:

B & Q (Retail) Ltd
Eastek
Manchester Open Learning
Plymouth Open Learning Support Unit
Total Training
Thames Valley College

It is anticipated that other delivery systems will also agree to participate in this project.

The open learning delivery systems that will be evaluated therefore range from in-house company training departments, through commercial delivery networks to Local Education Authority funded colleges. They provide a range of learning strategies for a wide variety of target groups, using a number of different support strategies including the following:

No support
Optional support
Computer mediated marking
Face-to-face tutorials by peripatetic tutors
Mentorial support by supervisors
Telephone support by subject specialists
Telephone support by guidance specialists
Written feedback by subject specialists
Combinations of the above.

INFORMATION THAT WILL BE REQUIRED FOR THE RESEARCH

Facts and Figures

Much basic data should be available from the records kept by delivery systems and tutors. Due to the workload of most administrators and tutors this information will have to be collected by the researcher from these records with minimal assistance. Information required for the investigation that will be available from these records will include:

* Student performance

* Student drop-out rates

* Assessment turn around time

Opinions

Opinions will be obtained from completed questionnaires and from interviews with administrators, tutors and students, they should include information on the following topics:

* Learning materials

* Tutoring system

* Administrative efficiency

* Guidance and counselling

Observation

The effectiveness of some support strategies can also be monitored by sitting in on the following situations:

- Students using materials unsupported
- Tutor contacts with students
- Guidance and counselling sessions

QUESTIONNAIRES

To obtain the required information the questionnaires will contain both closed and open questions to maximise their effectiveness (Patton 1980, Parlett and Hamilton 1972, Oppenheim 1966). At least two separate questionnaires will be required, one for the learners and one for support staff.

The information needed from learners includes:

- The reason for taking the course?
- Who is paying for the course?
- Where does the learning take place?
- Is the learning done in the employer's time or in the learner's own time?
- Are the learning materials attractive, easy to use and do they cover their perceived needs?
- What type of tutorial support is provided?
- Is this support adequate?
- How could the support be improved?
- Would another support method be more appropriate?

The information required from the tutors includes:

- The level of training, if any, received for their role?
- The method of tutoring used? (Telephone, face-to-face etc).
- Are they subject tutors or do they fulfil a wider role?
- Are there facilities available for guidance and counselling for learners?
- Is sufficient time allocated for their tutorial duties?
- Do they feel that they can provide all the support that the learner requires?
- Do they feel that a modified support strategy might be of more benefit to the learners?

It is anticipated that questions designed to obtain this information will enable areas of concern for both learners and tutors to be identified. These areas of concern will then be used to decide which groups or individuals to interview and/or observe.

INTERVIEW CHECKLISTS AND OBSERVATION STRATEGIES

Although it is intended to keep the interviews as informal as possible, it is considered that checklists are essential. Their use will permit the interviewer to ensure that areas of importance are not missed. Questions that fulfil the checklist objectives will be introduced when appropriate opportunities occur in the conversation. Any topics that are not covered by this natural process should be tackled by leading the conversation to provide an opportunity to ask an appropriate question. It is intended that, with permission, these interviews will be recorded for later analysis.

The areas of concern that should be included in the interview checklists will be identified from the completed questionnaires. The information gained from responses to open questions are expected to be particularly helpful in this respect.

It is intended that observation strategies will also be devised after analysis of the completed questionnaires. The observation will then be carried out by attending group tutorial sessions and monitoring other contacts between learners and tutors. If permission is obtained, these observations will be recorded on audio or videotape for later analysis.

OUTCOMES OF THE RESEARCH

It is intended that the research will produce:

- A database of delivery organizations with information on the support systems they use
- A comparison of the effectiveness of these support systems
- Design models for effective open/distance learning support systems

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SUCCESSFUL DISTANCE LEARNERS: SOME NEW ZEALAND CORRESPONDENCE SCHOOL STRATEGIES

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NEW ZEALAND

One recent comment has aptly described the change in emphasis in distance education from teacher to learner as the Copernican revolution in distance teaching practice (Moore, 1985). It also describes efforts at the New Zealand Correspondence School (NZCS) to provide support for its distance learners. In the last decade NZCS institutional emphasis has moved from teaching at a distance to the learner at a distance. Support for the distance learner is the central activity of the NZCS which is recognised as a leader in this field.

Distance education may be analysed to show the following characteristics: the separation of teaching and learning, the influence of an educational organisation, the use of technical media to carry content and facilitate teacher-learner interaction, the provision of two-way communication between the participants and the possibility of meetings for socialisation and didactic purposes. In addition, industrial methods are used in resource development (Keegan, 1986).

The NZCS is a high dialogue institution which reduces distance through individual and personal interaction between school and learner (Moore, 1983). This paper undertakes to examine the school's New Zealand setting, to look at reasons for student support and the functional groups involved, and to describe the activities and support materials used to personalise learning . The analysis is descriptive rather than quantitative.

The New Zealand Setting

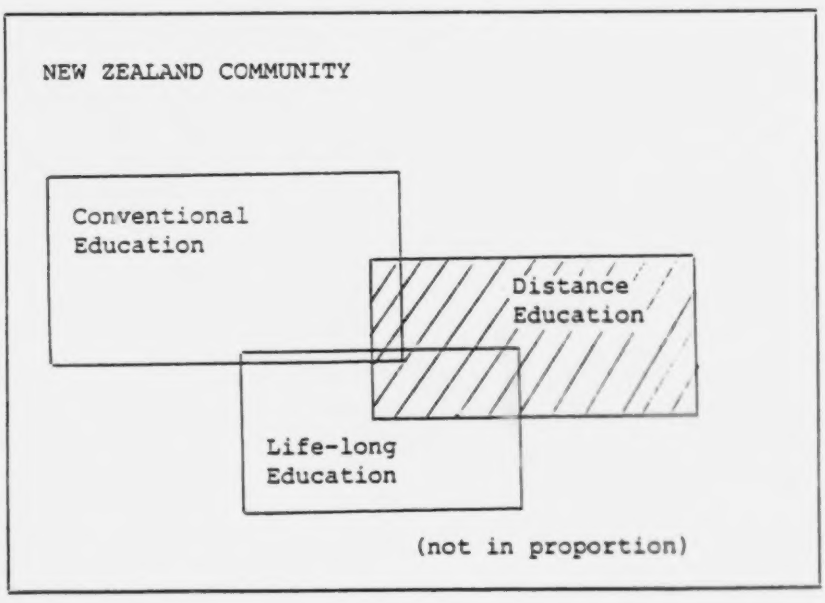
New Zealand's small (3.32 million) population occupies two mountainous South Pacific islands. Its indigenous Maori population, invaded last century by European - mainly British - settlers, now forms 12.0 percent of the total population. Pacific Island migrant groups added to this mix after 1950, 130,000 in the latest census.

Education, compulsory for six to fifteen year olds, is largely state funded. In the national system the NZCS is the sole distance provider for school-aged students. Founded in 1922 with one teacher, the school now caters for 20,000 students with 500 staff. It is complemented by two tertiary distance institutions, a single mode technical institute and a dual mode university. Originally its aim was to provide access to education for students who lived in remote areas. This group now forms only a small proportion of the full-time school-aged students. Department of Education policy now also caters for those who are unable to attend their local school through ill health, disability, pregnancy, family itinerancy, school phobia and psychological conditions, suspension from conventional school, being in institutional care and living with their parents overseas. There are over two thousand full-time students.

Since 1939 the school has provided a comprehensive back-up service for secondary schools unable to provide teaching in particular subjects and has also been a means of supplementing curriculum for small rural secondary schools. A third student group was added in the late 1940's, adults wishing to study in locations without access to evening classes. This group grew rapidly with the introduction of single subject entries in national examinations in the early 1960's (APEID, 1982).

Distance education in New Zealand has moved from being a fringe activity with little status, to being an essential component in the national education system (Pagney, 1982).

Place of Distance Education in New Zealand



So what kind of interaction is possible in developing countries? What constraints operate in achieving a synthesis between independence and interaction?

Access

One of distance education's great advantages in developing countries is its ability to provide access to education to people who are unable to attend traditional schools, colleges or classes. They often have very limited experience of formal education so the self-discipline and self-motivation comes with difficulty. Opportunities for interaction are therefore of immense value. However, the danger exists that the organisation and provision of interactivity in itself will prevent many such students, because of time and distance constraints, from enrolling for courses. Nonetheless, interactive activities are included in the form of study-centre meetings, tutor-group meetings, "elbow tutors", village meetings with elected group leaders, study group facilitators, and residential schools. Access to this interaction is often constrained by the realities of life.

Tom Ogolle's Tale

Tom Ogolle is a student who is a primary teacher working for his B.Ed. in Western Kenya. His nearest tutorial is in Kericho but he is unlikely to be able to get there in the rainy season (very good for the Kenyan tea-plants) when roads are often washed out. When the season is drier, his attempts may be foiled by the frequently unpredictable non-appearance of the local bus, the matatu, which he can wait for after an hour's walk. If it appears, it

Reasons for Student Support

Students in conventional settings exist in a highly artificial and wholly supportive framework. Linear progression, the interaction and reassurance of group activity, the instant oral and visual feedback of face-to-face teaching and learning are lost on entry into distance education (Sewart, 1980). This transition forces the student to accommodate to a specialised pattern of interaction and communication (Holmberg, 1984). Socialisation into distance education becomes an important need.

Learner motivation is achieved through interactive mediated communication in which tone, medium and frequency are some important considerations. Interactions designed to reduce distance can be built into learning resources, or further individualised by written communication, audio cassettes or telecommunication. Institutional motivation of student can also be achieved by speed of work return (Rekkedal, 1983), frequent telephone contact (Rekkedal, 1985) and comments on student work.

Course individualisation appropriate to a student's needs as they are assessed at or after enrolment is also an important motivator. Subject choice, flexible course design and parallel courses are means of personalising a student's work.

For many students the NZCS is their only access to compulsory education. For these students it is important to provide opportunities for peer group interaction and socialisation and

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will cost him a fare he can ill afford. If all goes well. the earliest he can get to the tutorial will be 3 pm. time for him to set off for home again. In any case, the tutorial will have finished by that time. Other students will have been arriving at different times throughout the tutorial session. for similar reasons. making the organisation of the teaching session difficult for the tutor. To be in time. he needs to have stayed in Kericho the previous night. but that costs too much. The tutor can't hold the tutorial later because he too has to make a journey home by infrequent matatu. The tutor can't stay overnight because the distance teaching institution can't afford to pay for this. Tom is strongly motivated to try to get to tutorials. because that is where he collects his course units. There is no postal service to his village and it is not used anyway for the delivery of materials because of its unreliability. The materials are often good. when he gets them. He has limited time for study in the small family village house. There is no telephone in the village and no electricity. Tom uses a kerosene lamp on the kitchen table and is sparing in his use of paper to write notes on. Apart from his course materials. he has no access to books or libraries. Occasionally. when he has managed to get to a tutorial. the materials have not been delivered. Tom is keen to learn. writes his assignments as best he can. attends the residential school once a year and has passed his examinations so far. Tom Ogolle does not live in the more remote parts of his country.

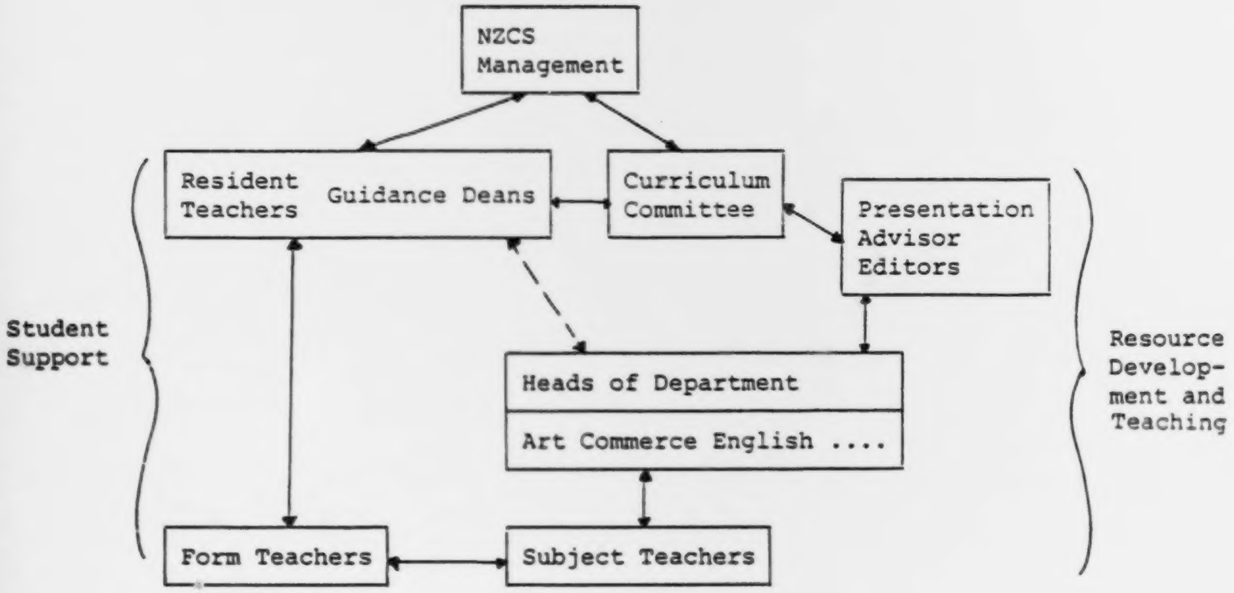
Of course the picture here of a student is a particular one. It is not always like this. But it is *often enough* like this to illustrate a number of constraints that are recognisable. Choices for interaction in developing countries are more limited than in industrialised ones and there are fewer "fall-back" positions when things go wrong. The communications infrastructure leaves fewer options open. Access via telecommunications is not often to mobilise local support. At senior school levels students compete with their peers from conventional schools in national examinations and certificates and employment or training opportunities. Knowledge and skills in study and examination techniques are important, together with practice in interview situations and job seeking. The transition which ends secondary schooling requires interpersonal and self-assessment skills.

Student support as developed at the NZCS in recognition of these needs, assists the distance learner to become a competent and confident person, in learning, social interactions and self-evaluation.

Functional Groups in Student Support

NZCS management structures, staff deployment and training reflect activities designed for student support.

Structure and Function: NZCS Staff


NZCS Management
Resident Teachers
Guidance Deans
Curriculum Committee
Presentation Advisor Editors
Student Support
Heads of Department
Art Commerce English ....
Resource Develop-ment and Teaching
Form Teachers
Subject Teachers

Although most of these structures relate to the entire school further comment is limited to secondary school examples.

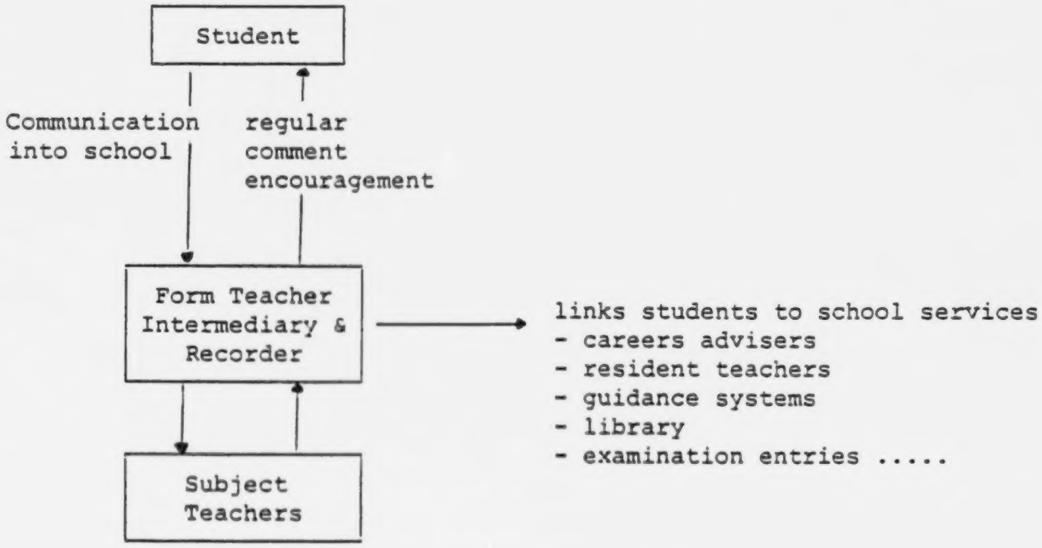
Curriculum Committee A senior staff group works in consultation with subject Heads of Departments in planning and co-ordination within national guidelines (evaluation procedures), compulsory studies ...) and organisational restraints (resource availability, flexible courses ...).

Presentation Advisory Editors work as instructional designers with course developers involved in planning, writing and production of print, audio and video resources. They act as quality controllers and assist subject writing teams to apply principles such as guided didactic conversation to first phase teaching resources, an important source of student motivation (Holmberg, 1983).

Subject Teachers involved in second phase teaching, marking and commenting on student's work. In this essentially handicraft activity teachers are encouraged to assist students through diagnostic and supportive personalised comment and to turn work around quickly, both being important motivators.

Form Teachers and Deans The full-time secondary student becomes the pastoral responsibility of a form teacher, a well trained and sensitive intermediary who mediates interactions between subject teachers and student, develops the student profile, and who also provides full student records and links to school services appropriate to perceived and expressed student needs. The form teacher, administered in a Dean Group, teaches each of their students for at least one subject and cares for only ten to fifteen students. Interactions are personalised through letter writing and telephone contacts.

Form Teacher Function


Student
Communication into school
regular comment encouragement
Form Teacher Intermediary & Recorder
links students to school services
- careers advisers
- resident teachers
- guidance systems
- library
- examination entries .....
Subject Teachers

Guidance and Careers Staff work on profile development at enrolment, monitor progress and assist student transition to employment or further education. Case conferencing and links to agencies involved in student support (Department of Education Psychologists, welfare groups ....) provide an informed context for learner and teachers.

Administrative Staff The typist and illustrator provide the typographical and illustrative expertise which is essential to interactive communication in resource materials. Telephonists, clerical and despatch staff contribute to accurate and fast interactions between school and students, a known motivator.

Specialist club organisers, magazine editors .... add to the school's human face.

Resident Teachers Ten resident teachers based in the field, care for about 200 students each. Working from their car and office they visit students each term, report back to the school-based teachers and provide socialisation opportunities through camps and school days. Analysis of needs, links with parents and description of student context are invaluable in enabling the form and subject teachers to cater adequately for their students.

Activities Appropriate to Student Support

Opportunities for personalised interaction, whether mediated or face-to-face, contribute to student motivation and socialisation. Many are based on the student profile developed at enrolment and later modified. The telephone provides interactive immediacy. At enrolment contact is made with student, family and any agency involved. One week later, planned to co-incide with student materials arriving, the form teacher calls the student. A follow-up call is made two weeks later and afterwards as needed. The student has ongoing access to free calling to the school. These personal contacts assist both socialisation into distance education and problem solving.

Letter writing personalises student/teacher interactions and is the medium on which the school is most often complimented. Both subject and form teachers return work with personal letters over and above specific comment on the work. Student responses indicate the value of letters in motivation, problem solving, access to school activities and development of student confidence.

Resident teachers and school-based teacher visits soon after enrolment, and afterwards at frequent intervals, help teachers adjust courses and approaches to student needs.

Many week long regional camps are held annually. Each student has one or more opportunities to attend. Family attendance is encouraged and programmes are designed for peer interaction, social and psycho-motor skill development. School days have similar functions. Career weeks mix work experience with skills appropriate to seeking employment or further training. They have proved useful and popular for senior students. This transition is further assisted by school testimonials, information and assistance on career planning and help with applications.

The annual month-long residential school for seventy 11-13 year olds provides a mixture of classwork and skill-based activities for isolated students. Experience of traditional classroom activities - the interaction and reassurance of group activity, the oral/visual feedback of face-to-face teaching and learning - are often new experiences for the student. Non-subject skills in handcrafts, bushcraft and aquatic activities are also programmed.

Constant workflow monitoring provides organisational support for teacher and student - preventing overloads and diagnosing faulty systems.

Some Resources Used in Developing Supportive Teachers

Providing effective student support is dependent on teachers' socialisation into distance education methods. Motivated and functionally skilled teachers are an organisation's greatest resource. (Turnbull, 1985).

Induction into distance education's specialised pattern of interaction and communication is equally important for teachers and learners. Whereas learners receive "Getting Started" booklets, teachers are orientated in face-to-face interactions. A teachers' induction course describes systems, introduces school personnel and examines facets of the new milieu. A school handbook, familiarisation with courses and buddy partnering also assist the new appointee. Tuition in second phase teaching takes place within subject teaching departments.

School developed handbooks on letter writing and telephoning are designed to build interactive skills used in personalising contacts designed for learner motivation and involvement.

Course planners and writers are constantly monitored by their Presentation Advisor Editor. In addition the school has developed courses in 'Course Planning', 'Evaluation in Distance Education' and 'Presentation Techniques'. Others are planned. Various procedural handbooks assist form teachers, deans and external tutors.

The recent appointment of a Staff Development Committee charged with assessing and meeting staff training needs indicates the school's belief that motivated, skilled and alert staff, teaching and administrative, are its greatest asset in working with distance learners.

The Copernican revolution in distance teaching practice, changing the emphasis in education from teacher to learner, implies support for both teachers and learners. This support, allied with strong committed leadership, monitoring, and structural change in the school organisation, has dramatically changed our distance learners' performance in the last decade. Positive changes in student work output and national examination pass rates (Rae, 1987), demonstrate the success of our well developed and evolving strategies for student support.

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INTERACTION AND INDEPENDENCE: ACHIEVING A SYNTHESIS IN DEVELOPING COUNTRIES

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Tony Dodds, International Extension College, UK

INTERACTION AND INDEPENDENCE: ACHIEVING A SYNTHESIS IN DEVELOPING COUNTRIES

Bernadette Robinson, Open University, UK and Tony Dodds, International Extension College, UK

The question posed by Daniel and Marquis (1979) about interaction and independence was how to get the mixture right. They saw the balance between these as the crucial issue facing distance learning systems. The last ten years have illustrated a variety of ways of mixing the brew, and have added new ingredients as a result of developments in new technologies and communication systems. Economic imperatives have also in the meantime taken some ingredients out. As they said at the time of writing, there is great scope for diversity. This has since been acted out in the very varied development of numbers of distance and open learning systems across the world which demonstrate surprising differences and even more surprising similarities in how they work and in students' learning experiences in relation to them.

We agree that interaction is valuable for socialising learning, for providing pacing and support in carrying out learning plans, and for mediating the authoritarian nature of a system. In addition, we see interaction as valuable and essential to the "independent" side of the equation in providing feedback on the functioning of the system and on courses to those who generate them. Interaction is clearly desirable in distance learning systems, both as a way of helping students to be more effective as learners and as a way of closing the communication loop between the producers of courses and the learners.

two groups who often proceed on parallel but not intersecting paths. We note in passing that in our experience the "interaction" side in many systems has lower status assigned to it by those working at the "centre" of a system.

Having recognised the importance of getting the independence-interaction equation right, of effecting a judicious balance from the options available, the question we wish to ask in relation to this is how far is interaction *possible* in developing countries? Where resources are very limited, what is *feasible*?

Most developing countries continue to be faced with enormous pressures to increase access to education. These pressures are both economic and political. Many third world countries spend up to 20% of their budgets on education. The pressures to expand educational opportunity are confronted with an inability to expand educational expenditure. In the face of this and of high growth rates in the population, many governments are attracted by the claims for economy made by distance education providers and have sought ways to use these new approaches. Also, since the majority of the populations of developing countries live in rural areas where formal structures of education are lacking, distance education enables workers to learn while they earn and reaches those women who traditionally have had no other access (for example, women observing purdah).

These pressures have determined the starting point for distance education in developing countries. In many, particularly in Africa though increasingly in Asia, secondary school entry (or more rarely completion) has been the point of cut-off between the majority and the educated elite. In these circumstances, distance education has been introduced to provide the only substitute for formal secondary schooling for teenagers and young adults who are otherwise excluded from it for lack of available places (as, for example, in Malawi and Zambia). It has also been used, as in industrialised countries, to provide a second chance for adults to obtain qualifications (for example, in Pakistan, Malawi and India). It has been frequently used to train new teachers and to up-grade existing ones, particularly to meet the current up-surge in the need for primary education as a consequence of trends in population growth, (as in Kenya, Pakistan, Tanzania and Zimbabwe). The most conspicuous distance teaching institutions, in developing as in industrialised countries, have been the tertiary-level institutions, in particular the open universities. These are more common and better established in Asia and some Latin American countries than in Africa, though there are now a number of well-developed plans in African countries for university expansion by distance teaching. Even for the forgotten majority, the largely illiterate or semi-literate adult populations of the rural areas and urban slums, there have been significant and interesting experiments to harness distance education methods to basic and informal education, by combining mass media information channels with group study (for example, INADES's programme for agricultural workers in the Ivory Coast, Newspaper Courses in Pakistan, Co-operative Education in Zambia, and Radiophonic Schools in Colombia and Honduras).

This is the context, too briefly given here, against which we examine some issues of interaction and independence. Although industrialised countries similarly face economic problems, and their distance teaching institutions experience painful choices in the apportioning of scarce resources, their problems are not of the same scale nor as acute as those of developing countries. Perhaps as importantly, industrialised countries have more options open to them, and for them it is not so often a choice between something or nothing.

available, and likely to remain so, although "The Missing Link" report of 1984 has stimulated activity in investigating ways to develop telecommunications in developing countries (one of its findings was that of the 600+ million telephones in the world, three-quarters are concentrated in nine industrialised countries). The scarce resource put into providing the interactive part of the system above did not achieve its desired end, namely, for the tutor to engage in joint learning activity with the students.

Interaction is important for competent learners. It is even more important for those whose educational experience is limited. The independent learning component of distance education needs a certain level of student competence in literacy and learning in order to function at all, especially when students are studying in their second or third languages. Interactivity is often the only way to make up for this lack of experience. But it is always an expensive element. The UKOU, for example, currently spends 21% of its budget (about £10 million) on regional academic services.

Cost

The issue of cost is a difficult one. The claim of distance educators is that their methods offer opportunities to achieve economies of scale, allowing large numbers to be educated at low per-student costs. This is often the basis on which proposals are justified and implemented. Yet most interactive learning does not fit this. It involves the same teacher-student ratio as formal learning, and the same buildings and facilities requirement, unless some of this is replaced with telecommunications components which carry their own issues of cost. In the third world, where economic constraints are at their tightest, distance educators face particularly acute problems in deciding whether their scarce resources are better spent on providing interaction with its high per-student cost, or more courses for more students: quantity rather than quality, to meet the pressing need.

Human Resources

Interactivity depends on the tutors, animateurs or leaders who facilitate it. Providing this human resource presents greater problems in developing countries. The distance education programmes in Africa and Asia often began by modelling themselves on the more traditional correspondence colleges of Europe and America, with a minimum of interaction. Students were left to study on their own. In response to high drop-out and failure rates new forms of interaction, mainly occasional face-to-face, have been introduced. These developments however have been mounted on minimal economic resources, and suffer both from poor quality tutors and from inadequate support and supervision. Interactivity is also restricted by cultural notions of what teaching and learning is: a widely persistent model of education is that teachers talk and students listen in silence. Only part of the reason for this is the lack of materials or of training to do anything else. The model is also bound up culturally with issues of status for the teacher in continuing to act out the role in this particular way.

Some illustration of the difficulties is provided by the Malawi College of Distance Education, set up in 1965. Correspondence courses were seen as the only means of providing secondary education for primary school leavers (young teenagers). Communities found accommodation where students could be brought together to learn, not from a teacher, but from correspondence courses. Supervisors, not qualified, were recruited to oversee the groups. The supervisors came under great pressure from parents and students, as well as being shaped by their own concept of what a teacher does, to take over the teaching role and to reduce the courses to text books. The result is that the students get the worst of both worlds: incorrect use of correspondence materials and poor teachers. Plans, as yet undefined, are currently being discussed to introduce training and supervision. This also illustrates the low priority given to training: it is too often seen as a remedy when things have gone wrong rather then an essential preparation which will help ensure that things go right. Confusion is also illustrated in the role of animateurs or group leaders in the remedial education programme for Namibians in exile in Zambia and Angola (set up in 1982 by SWAPO with Commonwealth Secretariat assistance). The group leaders' role was to organise and lead the study exercises, learning along with, but a little in front of, the students. The group leaders have, in fact, often been confused as to what their role was or how to perform it. As a consequence, less confident students have dropped out and more able ones have preferred to study on their own. Although several thousand young adults have been able to pursue their education with this scheme, the value of continuing with study groups as a major vehicle of distance learning in this way is now being questioned because of these difficulties by the Namibian Extension Unit (NEU) which organised the project.

These examples illustrate two particularly difficult problems in developing countries: how to find or create the human resources to provide the interaction, and how to induct them into their roles and facilitate their development, so that they become effective as tutors or animateurs and achieve credibility. Although academic qualifications have been rated as low in importance in UKOU tutors compared to other characteristics, in developing countries the credibility of tutors is very much linked to academic qualifications in the eyes of the students, so it is very important that they demonstrate competence. If "creating" tutors, developing countries face a larger task in educating them in the content areas of courses as well as at the same time helping them to develop effective tutoring practices. Sometimes there is only token recognition that good tutor induction and development is essential and needs to be sustained, and that resource needs to be given to it. This is a problem shared with many distance learning systems in industrialised countries.

We think that achieving a synthesis between interaction and independence in developing countries is more difficult but not impossible. It is also, in many cases, more important because of students' limited educational backgrounds. The weight of resources necessarily comes down heavily on the "independent" side of materials production for much of the time, but we would argue that it does not inevitably have to be in the ratio that often operates. Perhaps more importantly, the balance itself is not always examined consciously enough. Even so, many developing countries have demonstrated creative and diverse applications of distance education with interaction organised to give access to students who would otherwise be deprived of it. The relationship between independence and interaction, however, more often represents a tension rather than a synthesis. We suggest that taking the experience of the learner in the system offers a starting point for re-appraisal.

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TELECOMMUNICATIONS FOR INTERACTIVE TUTORING: THE UKOU EXPERIENCE IN THE 1980s

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"Contact need not imply face-to-face meetings". (Daniel and Marquis, 1979).

By 1979 the Open University had started to explore the use of telecommunications (telephones as an interactive audio medium) for small group tutoring. It was already used widely in one-to-one interaction for communication between tutors and students. As the range of Open University courses grew, and course populations decreased for a large number of post-foundation courses, telephone tutoring, individual and group, was seen as offering alternative access that was becoming increasingly difficult to provide on a face-to-face basis. Telephone teaching was increasing in most regions and expertise in its use was growing, as well as some research into its effectiveness. Training materials and workshops were developed to help tutors to use the medium. In their article Daniels and Marquis (1979) wrote that "Telephony can make a very cost-effective contribution to remote learning and even in the densely populated UK it provides interaction at a lower cost than face-to-face meetings for advanced courses". They quoted Turok (1977) as predicting that it would have a very important future in the UKOU.

Has telephone teaching been important in the UKOU? Does it still provide a cost-effective alternative to face-to-face meetings?
What has been the UKOU's experience over the last decade?

Its role.

Telecommunications has largely been used for telephone teaching in the UKOU, that is, voice only. It has been used for interactive data transmission on a more limited scale, firstly in the form of Cyclops, an experimental two way voice-plus-data tutoring project, (McConnell, 1984) and secondly, in the recent developing use of computer conferencing.

Telephone teaching has taken two forms: one-to-one tutoring and small group conferencing. Neither form has been used for the delivery of course content. Its use is designed to help students to learn from their printed and other materials, to resolve student difficulties, and to provide students with access to a tutor or counsellor, or other students in group calls. It forms part of the regionally organised tutorial support services provided for students and financed from individual regional budgets. There are 13 Open University regions, each responsible for its tutorial provision. Decisions about the best means of providing this are located in the regions which vary in size, availability of transport, student populations and their dispersal. Tutoring most often takes the form of face-to-face meetings, but is also conducted via telephone, audio-cassette, correspondence and more recently by computer-conferencing. There is considerable variation in the extent to which regions use telephone teaching.

Tutorials in the UKOU are optional for students. However, some students who would like to attend are excluded for reasons of distance, or because they are home-bound or disabled. Telephone tutorials, whether individual or group, enable tutors and students to interact in real-time and can offer speedy resolution of problems. For some students they provide the only means of immediate or direct contact with their tutor. They offer access to a "real voice - real person" in the system. While expenditure on telephone tutorials, whether conference or individual, represents a very small part of the university's tutorial budget its function is significant for a proportion of students. It is their main means of interacting with tutors, other than through correspondence tutoring on written assignments: for example, in Scotland, some 2,000 students are tutored only by telephone apart from their written exchanges in the form of correspondence tuition.

Audio-conferencing.

The UKOU has not used a dedicated network for teaching. Audio-conferencing uses the now privatised British Telecom Conference Call Service (with the exception of the Regional Centre in Wales which can arrange cheaper calls through its own rather elderly conferencing bridge). Regional bookings are made with British Telecom for each meeting, which can link three to eight separate locations into a common but temporary network. The average number of participants in a call is five. No capital investment is needed in order to use this service. Those taking part can join in at the appointed hour on their domestic or work telephones. Its potential is increased by the addition of extra equipment, for example, loudspeaking telephones (low-cost), conferencing bridges (medium-cost) and graphics or telewriting facilities (high cost) such as Cyclops.

These enhancements increase the flexibility and potential of the medium, but also increase costs. In general, equipment costs increase as the use of the system moves towards becoming a delivery mode for materials. In the early 1980s, the UKOU considered a proposal for its own dedicated audio-conferencing teaching network for use partly as a delivery technology and partly as a way of reducing costs and improving on the quality of the existing technology, but the setting-up and running costs were too high to find funding at a time of financial constraint; there was also resistance within the UKOU to the plan as well as competing demands on funds.

Access

Access for students has been relatively easy since telephone teaching uses a widely available and familiar domestic technology. It is also user friendly in the sense that no special equipment or connections are needed to allow students to participate. In the UK there are 40 telephone lines for each 100 inhabitants compared with 45 lines per 100 in France and W. Germany and 33 per 100 in Italy (Graziosi,1988). The present developments in telecommunications policy in Europe and the spread of terrestrial ISDN (Integrated Services Digital Networks) is likely to increase this rapidly after 1992 (for some European countries, not necessarily the UK) as well as enabling a wider range of services to be offered such as data transmission, and better conferencing facilities (Wigand, 1988). Access to telephones for UKOU students is higher than this. Surveys have shown figures of 80%-86% though this conceals some regional variation. Where it is lower, it is relatively easy for regional staff to arrange alternative access for students. However, access to the use of the telephone system is also constrained by other factors: by *attitudes* towards it, by the *cost* of using it and by the *quality of the technology*.

Unlike France and Canada, for example, the UK has an antiquated telephone system. British Telecom is in the middle of a programme of modernisation, moving from electromechanically operated exchanges and analogue signals to electronic switching and digital signals ("System X"). Progress on this has been slow, geographically patchy, and the areas with the greatest need are still waiting: the completion date continues to recede into the future. Where the "old" system is joined onto the "new" in conference calls, the sound quality of the whole call is damaged for all participants. What this means for telephone teaching is that often the poor quality of the technology prevents effective communication of any kind, and gets in the way of the teaching function. This discourages use by tutors and students. The quality of the technology since 1970 has got better for some and worse for others, depending on where they live. This continues to be the case, though increased cost has become more of a deterrent over the last few years.

Costs

The charges and cost-structure for telephone services vary widely in Europe. Current analysis shows that at present the UK has the most expensive local calls in W. Europe though comparatively cheaper long-distance calls (International Telecoms Price Survey, 1988). However a price restructuring by British Telecom is due in mid-1989 so this may change, probably not in the direction of lower costs. The USA continues to provide the cheapest telephone services in the world, which must go at least part of the way towards explaining why telephone teaching and audio-conferencing form a larger component of distance teaching systems in North America than they do in Europe. One important factor affecting its use in the UK is the high cost. Cost escalates even more dramatically if audio-conference calls are held between European countries. An attempt recently to hold an hour's conference call linking individuals in six European countries drew an estimated cost of £1,000. The attempt was, of course, abandoned.

The costs of most of the one-to-one calls in the UKOU are borne by students. Since the university does not pay for these, the number are not logged. Costs of one-to-one calls are carried by the university when they form part of the tutorial hours allocated to a tutor (for example on a project work course) or where there is special need for an individual tutorial. Costs for calls are the standard charges by British Telecom who use a band-cost structure based on time of day, distance and duration of call.

Changes and Trends

Although audio-conferencing is a highly interactive and effective means of tutoring and suitable for use over a range of subject areas and tasks in UKOU courses (Robinson,1984), the use of a medium is inevitably related to cost and what other alternatives are available.

Audio-conferencing is now more expensive than it was in 1979. Its use in the UKOU increased up to 1983/4, and has since declined to a level lower than in 1981. Costs have increased several times since then. In 1987, the cost *structure* changed, making conference calls much more expensive in relative terms than they had been. Conference calls became two to three times as expensive as before. The cut-off point determining when a conference call became cheaper altered significantly in favour of face-to-face meetings except for the few regions with the most widely dispersed student populations (for example, Wales and Scotland). Except in these circumstances, it is now not nearly as cost-effective an alternative to face-to-face meetings as it was in 1979. Its use has decreased significantly in some regions and there is currently less use overall in the UKOU than there was in 1981 (Robinson 1981, 1988).

In 1987, eight out of the thirteen regions used audio-conferencing to very varying degrees, ranging from 5 hours in one region to 160 in another (Wales). Eleven out of the thirteen regions reported that high cost, poor technical quality of calls and old UKOU equipment (such as loudspeaking telephones or conferencing bridge) prevented greater use of it. The two regions which did not use it saw no need because of other tutoring alternatives available (Delivery Technologies Report,1988). In 1981, four regions were using 100 hours or more of conference calls; in 1987, only two were continuing at (or slightly above) their 1981 level of about 140-160 hours. The remaining two high users had dropped to below 30 hours, but still retained the ranks of third and fourth highest users. This illustrates the polarity that has developed between a few high users and a majority of low users, with a wide gap between them. In 1981 there was an equally wide spread but a more even distribution of use by regions.

Other factors which have affected the use of audio-teleconferencing are organizational. The equipment being used in the regions is old and has not been renewed over the last 8 to 10 years or longer. The UKOU has an improved internal network operating at the centre (Walton Hall) but not in the regions, with one exception. The intended plan, which includes regions in it, has been halted indefinitely for lack of funds; it is now more difficult to communicate with the centre using the internal telephone network and internal conferencing is now no longer possible because the quality is so poor. The regional equipment in the plan includes switchboards which have a conferencing facility; this could cut the cost of conference calls for teaching purposes by up to 50%. Regions also have less equipment than in 1979, fewer of the "enhancements" to the system mentioned earlier. As costs grew the need for them declined in some regions. As the equipment has got scarcer and older, the use of it has in turn declined. As use has declined, tutors' skills are lost.

One-to-one calls continue to be used widely across all regions though again there is considerable variation in how many of them are paid for out of regional tutorial budgets. The largest category of one-to-one calls are those paid for by students. One-to-one tutorials paid for by the university in 1987 ranged from 6 hours worth in one region to 880 hours' worth in another (Scotland). Overall, the number paid for by the university has increased since 1981 as they have become established as a legitimate part of tutorial programmes. Although the UKOU has tried to negotiate them with British Telecom, there are no special educational rates for telephone teaching.

This paper has inevitably focussed on issues of cost and technology. The UKOU has learnt in the 1980s that telephone teaching offers a highly interactive medium which can work in harmony with other media (one-way radio plus phone-in, computer-conferencing plus audio-conferencing, print or audio-cassette plus telephone). UKOU research and experience have established its strengths and weaknesses as a tutoring medium, have developed adaptive teaching strategies, and effective training approaches. Research has explored its use integrating two-way graphics for science and technology courses among others with Cyclops (McConnell,1984) and the inter-personal dynamics and communicative features of audio-conferencing in tutor-groups (Rutter and Robinson, 1981). Its potential for greater use remains, if problems of cost and technology could be overcome.

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Interactivity, independence and cost

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In the ten years since Daniel and Marquis' paper appeared in *Teaching at a Distance*, it is a mark of the paradigmatic nature of the distance education models with which they dealt (notably Britain's Open University and the Télé-université in Quebec) that much of what they said would, I suspect, still go unchallenged. The physical separation between teacher and student that is a characteristic of distance education means that the former of necessity have to use media to teach. By their very nature, many of the media used in distance teaching (printed materials, broadcasts and audio- and video-cassettes, home-based laboratory experiments) do not allow any two-way contact between teacher and student. How to provide such contact remains a significant problem.

There is nothing unusual about students learning from media which do not allow for two-way communication. Arguably the first revolution in educational practice was the library as a place where scholars and students could repair to use collections of manuscripts and books. Early examples included the libraries at Alexandria, established by Ptolemy I (308 - 246 B.C.) and Pergamum, founded during the reigns of Attalus I (d. 197 B.C.) and Eumenes II (d. 159 B.C.). The invention of printing based on moveable type, initially in China in the eleventh century, but more successfully in Korea in the early fifteenth century (where no less than three fonts had been developed by 1434), and in Germany at Gutenberg in the middle of the fifteenth century, revolutionised the provision of books to scholars and students. In conjunction with the lecture and the more private tutorial, the study of books provided the basis upon which much of higher education teaching practice was founded until the emergence, with the sciences, of the laboratory practical and field trip as methods of teaching students. Not for nothing do we still talk about "reading for a degree". The development of correspondence education, possibly first at Lund in Sweden in 1833, then in England in 1840, was merely an extension of the practice of learning from materials, except that the student was helped by the teacher's written correspondence rather than by verbal comments. In similar vein, the development of the written examination by the Chinese, around about the eleventh century, as a means of selecting entrants to higher education and the civil service, obviated the need to see every candidate. In fact, nearly every significant revolution in educational practice has tended to increase the scope for individualised study and learning at a distance. Only the eighteenth and nineteenth century switch away from an educational system based on the study of books coupled with more or less individualised instruction from a tutor, to one based on the instruction of a class by a teacher working within a school - a development that at the time represented a massive increase in educational productivity - had little to do with the practices that are so characteristic of distance education.

However, correspondence education could be criticised on a number of grounds: first, the quality of the materials given to students often left a lot to be desired; second, the quality of the comments made on students' assignments by tutors could be poor; and, third, the level of drop-out was often high. Good correspondence and distance teaching institutions did something about the first two of these, in the hope that, in conjunction with advisory and counselling services, this would do something about the third. But these 'cures' could result in a further criticism, exemplified by Harris' accusation that "the effects of the procedures of distance education at the OU [Open University] seem to include strong tendencies towards conceptual closure".

Harris argues that "conventions of 'good writing' and 'good broadcasting' pre-construct a largely passive student" (1987: 139). He contends (1987: 141-2) that what is important in higher education "is argument between people, unconstrained discussions which raise 'validity claims' of several types, and which settle these claims only by the force of the better argument. The most obvious medium for these discussions is face-to-face contact". Harris acknowledges that the mere presence of face-to-face discussions in conventional universities does not guarantee 'democratic discussions' of the kind which he identifies "as the kernel of the critical role of the university", but "distance education on the OU [Open University] pattern at least, is the only form of higher education specifically to be designed on any other basis than the democratic discussion" (1987: 142)[1]. The use of 'packaged' learning materials which define the objectives, content and desired outcome of study, coupled with a lack of libraries, little contact between isolated students and their tutors and peers, and tutorial roles which are 'supportive' of the main teaching materials, can lead all too easily to students who are passive consumers of the educational experience they are offered.

Harris is not alone in his criticisms. Tom Kaye has drawn attention to the limitations inherent in being a distance teacher: "The distance teacher is not unlike a disc jockey. He sits enclosed in his working place, surrounded by his resources but cut off from the outside world, presenting his pre-selected programme to the accompaniment of appropriate comments but without any direct feedback from his clients" (Kaye, 1981: 241).

Before we despair, however, we need to ask ourselves first, whether things are that much better in conventional higher education; and second, whether they are really that bad in distance education. Germani (1979:211), for example, described the Latin American university system with its overcrowded lectures, in which "the professor engages in monologues with little or no discussion or interaction with the students", and the lack of textbooks, compensated for by lecture notes (*apuntes*) whose "quality in content and structure was often substandard because, with few exceptions, the professor accepted no editorial responsibility". Often, "the *apuntes* were used as the main, or even the only, reading material to prepare for the final exam. The professor suggested a bibliography for his course, but often it was not of much use to the students because of the unavailablity of many books and journals". Davies (1985:191-2) criticises of the traditional mix of lectures, tutorials and laboratory work which is still the dominant mode in British universities: "the quality of this model as a learning model is questionable, as students tend to be passive recipients, have little incentive to learn, fail to develop the intellectual independence necessary for their future flexibility, and be inefficient at transcribing notes from the lecturer's pad, via his voice, to their own". To this can be added the growing use of course textbooks to replace some of the functions of lecturing and primary reading. As Corner (1988) coments:

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[1] It is worth saying that this is a very English view of higher education. How much 'democratic discussion' takes place, for example, in Italian or German universities?

> "Already there are some courses ... where this type of pre-processed reading seems to have partly displaced the proper role of the lecture and the seminar as active, dialogical shapers of study .... Such a loss in students' experience of the *dynamics* of thought and the friction of real argument raises, again, those fundamental questions about the extent to which higher education is able effectively to provide for the acquisition of lasting competences rather than the temporary accumulation of "commodity knowledge".

There are, of course, other approaches to teaching in higher education, but the point remains, I think, that there are legitimiate concerns about the standard of higher education offered in many conventional universities, and a fear that the expansion of higher education, coupled with the current emphasis on increasing efficiency, has forced higher education to the point at which the experience of students on first degree level courses is one of independent study in which the quantity and quality of discussion is limited.

This is no place to get into a debate about whether or not higher education at a distance is better or worse than traditional forms of higher education - however we might measure it. But having as it were posed a problem about the quality of distance education, what can be done about it?

One of the attractions of distance education is that there are potential economies of scale to be reaped from the substitution of capital, in the form of teaching materials, for the labour of classroom teachers. The capital investment can be considerable, of course, but once made, very large numbers of students can be taught at relatively little cost, particularly if the materials can be used for a number of years.

In any distance education system there will be some costs which are directly related to and variable with the number of students in the system. At the present time most forms of interaction between students and teachers tend to be centred on a tutor or *animateur*. Obviously there are limits to the number of students a tutor can successfully interact with in a meaningful way. Since there is a direct relationship between the number of tutors, the number of students, and the work the tutors are asked to do, the more tutor-student contact built into the the system, the more costs escalate. If too much support is provided, we end up with a very expensive labour and capital intensive system. Hence, attractive as it may be, the answer for distance educators interested in controlling costs is not to build in more face-to-face contact and correspondence and telephone teaching.

Had the world remained still at the point in time when Daniel and Marquis wrote their article, there would be little else to say. It would indeed still be a question of getting the mixture right.. But the world has changed. So ubiquitous have microcomputers become in the developed world that we tend to forget that Apple Computer Inc. was only established in 1975; that Tandy Corporation was set up in 1977; and that since then there has been a development and sales explosion in hardware (including, of course, IBM and IBM-clones) and a massive increase in available software. Since the early 1980s distance education has been revolutionised in respect of the design, development, production and storage of instructional materials; direct instruction (e.g. computer-aided learning or CAL, and computer managed learning); and communications. It is on the latter development which I wish to concentrate.

Computer-mediated communications (CMC) comprise electronic mail and computer conferencing facilities which enable messages to be keyed into a microcomputer connected by telephone to a central computer, where these messages are stored and can later be accessed, read, and if necessary replied to by the recipients. It provides distance educators and their students with the means of entering into genuinely interactive communications at a distance, untrammelled by the constraints of time. The tutor can be in direct contact with individual students using personalised electronic mail, with all his or her students (in a closed tutorial group), with other tutors (in a closed tutor group), and with all the students and tutors on a course through open conferences. There can also be 'student's only' conferences. So tutors can be much more responsive to the students, adapting the direction and content of a course to meet individual requirements and the needs of the group, and students can chat among themselves and form self-help groups.

What evidence there is suggests that CMC enables "liberative discourse" to take place (Boyd, 1987), increases motivation (McCreary and Van Duren, 1987), facilitates co-operative learning and the formation of self-help groups, fosters more active participation in the course than is observed in the classroom (Henri, 1988: 88), and encourages "personal viewpoints and diversity of opinion rather than … offering authoritative solutions to the problems posed in [a] course" (Feenberg, 1986).

There are plenty of problems of hardware, software, cost, tutor and student acceptance, tutor training in the use of CMC, etc. to be solved before use of CMC becomes widespread. Meanwhile, distance educators need to consider whether CMC is merely another medium to be added to the range already available, or whether it should replace some of the other, less dialogic media. For example, could CMC be used to support students whose main source of information is not the carefully packaged instructional materials which are the hallmark of institutions such as the British Open University and Deakin University in Australia, but rather a pile of unpredigested books and articles which they could then be helped to study? If so, this could lead to a massive change in the way resources are used by distance teaching institutions such as the British Open University. In effect, there would be a move away from the capital intensive (and costly) development of mass-produced instructional materials, which would be replaced by bought-in materials (books, offprints, etc.) acquired at a much lower cost. The savings generated could be used to teach and counsel students through CMC systems. The role of academics in distance teaching institutions, which, because of their role as writers, has been largely divorced from that of academics in conventional universities, would change again, becoming closer to the traditional role of academics in conventional universities, but with a subtle and important difference: they would be conference moderators and personal advisors, not lecturers and seminar leaders.

Economies of scale should still be achievable since, in their new role as conference moderators, academics could handle more students that their conventional counterparts. And since many distance education courses at the higher education level have relatively few students on them, two, three or four academics should be able to run the conferencing system adequately, with some help from part-timers who would mark students' assignments. Against this there would be the costs of the CMC system, and particularly the cost of equipping students. A study of the costs of CMC on the Open University's DT200 *An Introduction to New Technology* course (Rumble, 1989) suggests that these are not inconsiderable. However, once a conferencing system exists, *and provided students have the responsibility for providing their own access to a suitable microcomputer and modem*, then the marginal cost per hour on- and off-line use do not seem too exhorbitant (perhaps £5 to £7 per hour of student usage).

What are the advantages of CMC? With its adoption, there should be less excuse for mass produced courses with an 'authoritarian' flavour; there should be more scope for personal involvement on the part of students in the development of personally meaningful projects; there should be greater autonomy in the choice of routes towards the achievement of learning objectives, and more discussion and real interactive dialogue in the process. Passive students who read what they are given and regurgitate it for the examination should find life tougher. All in all there is a real possibility that we are on the threshold of the third generation distance education systems which combines access to mass-produced information with real interactive communication. Of course, there is still a role for mass media courses. I am not suggesting that institutions such as the

Open University should change their style completely. But computer mediated communications are opening up the possibility of a new kind of course.

All this suggests that there is the potential for a massive revolution in the practice of distance education which will provide distance students with access to discussions and greatly increased interactivity - all at an affordable price. Now, ten years after Daniel and Marquis, the world of distance education is still recognisably the one they wrote about - firmly based on centrally developed mass-media distance education materials, with interactivity a desirable but costly service. In ten years time the situation may well have changed out of all recognition. We no longer have to meet to participate in interactive dialogue and discussion. Third generation distance education looks as if it is just around the corner. Only the next conference on this topic, in ten years time, will have the benefit of hindsight, to know whether or not the vision of dialogue at a distance will have become a reality.

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Interaction Costs Money:
independence is free?

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Interaction costs money; independence is free?

Having spent the whole of my life, as far as I can recall, associated with education in some way - as a student, as a teacher, as a manager or as some combination of these, I have concluded, to my own satisfaction at least, that educationalists are paranoid. They continuously perceive that they have enemies in government, whatever that shade of government, enemies in industry or at least people in industry who refuse to see the value of education and enemies in the community. If all educationalists are paranoid, the most paranoid of them all are those concerned with distance education. Not only do they perceive that they have the same enemies as other educationalists but they also perceive every one else who is involved in education as their enemy. And they perceive all other educationalists as their enemies because, to no small extent, they see themselves as the apostles of a New Testament.

At the time of writing this New Testament is not yet in its final approved state. The Gospels of Peters, Keegan, Moore, Holmberg and others exist but not in a definitive format and the acts of the apostles flow regularly from the papers of Distance Education, Open Learning and the American Journal of Distance Education. The beginning of the book of the Apocalypse can be discerned in certain occasional contributions and perhaps I too can offer a few verses to this culminating riddle.

A major difference between conventional education and distance education is that the latter offers, or seems to offer, economies of scale arising out of the substitution of the traditional teacher by means of a package of materials. And herein is a major source of the enmity and jealously, since it is not the traditional system of education which is under threat from this non-traditional means but the very practitioners of the system, people being replaced by materials, the shock wave of the industrial revolution hitting education after hundreds of years of complacency.

It was probably appropriate for distance education to set itself up in its early years as something different. One of the earliest and certainly most quoted apologists of distance education, Otto Peters, did this, postulating the existence of two forms of education, conventional education based on personal communication and distance education based on industrialised processes and technological communication. Distance education might be seen by its proponents to be better than traditional education. After all, traditional education depends entirely on the performance of the individual teacher in the classroom while distance education provides for all a guarantee of high quality learning materials. Moreover the New Testament is hedged around with the latest technology of television, radio and satellite communication - electronic communication of every sort which had either been unavailable to the writers of the Old Testament or had proved a white elephant (television studios in the universities) or peripheral (schools broadcasting).

Examples of systems of distance education are legion but I will attempt to link them together in three broad groups. The first group covers the traditional correspondence schools who send materials by post to the students who study in isolation and send back assignments to the school for marking and comments. This postal communication is the only interaction between the institution and the student. Its proponents defend it on the grounds of the learners' wish for autonomy and respect for the right of students to learn by themselves at their own pace and wherever they wish to do so.

The second group is found mainly in Eastern Europe and is less well known in the literature. The students receive the materials at regular (normally fortnightly) and compulsory seminars. They study alone but receive motivation, explanation and assessment through the compulsory classes. This group is not dissimilar to the traditional patterns of teaching in higher education where students study alone but also attend lectures and seminars. It is, in fact, an extreme form of this traditional pattern in which the seminars play a much smaller part and self study a larger part. Hence, some theorists of distance education would not accept it as "true" distance education.

The third group embraces the United Kingdom Open University and many of the examples of distance education in Australia and in other parts of the world. An enormous variety of communication and support is offered to the students and students pick from these whichever forms of communication suit them best. Again, some might suggest that this is not "pure" distance education in that such systems embrace face to face sessions. However, unlike the second group they provide individual support to the students who are learning at a distance through a variety of flexible approaches.

The title of this conference "Interaction and Independence" is an interesting one and will mean different things to each of those who attend. The last fifteen years have spawned a whole literature concerned with the definition of distance education and the burden of this literature is a complaint that there is no unanimity on the terminology which is being used. In the last three or four years we have seen the beginnings of a similar literature concerning Open Learning. Only last year the National Extension College celebrated its 25th Anniversary in Cambridge with a production of the casebook "Open Learning in Transition", the proceedings of its conference. We look set fine to be inundated by volumes of scholarship seeking academic definitions of all the latest trends. I would myself vastly prefer us to spend our time on the initial part of this conference theme - interaction. It will not be from a final analysis of educational jargon that the best systems for student learning will be evolved. It will rather be from an analysis of the basic down to earth needs of students and the approach to this is not dissimilar to the approach which has fashioned the changes in traditional education over the centuries.

There are many examples of the use of written materials for educational purposes going back almost to the very beginnings of written records. Distance education is not a new phenomenon. What is new is the growth and popularity of distance education and this growth has occurred through the development of new technologies and industrial processes. Nor is distance education a discrete phenomenon. The variety of traditional education is not inconsiderable. It embraces, for example, one to one tuition at the face to face level, class tuition at the face to face level and large lectures at the face to face level. The experience provided for the student in each of these methods is greatly different. The first could and usually will be interactive; from the last there is often little or no interaction. Some systems of distance education are identical to the one to one tuition except that they are at a distance using telephones, in which case they are immediate, or using correspondence, in which case they are extended over a more lengthy period of time. Other elements in distance education such as the use of television and radio are not dissimilar to the lecture class. Distance education is not a discrete phenomenon; it is one of the varieties of education or rather it is several of the varieties of education since it is not a single agreed system.

Distance education possesses within itself the seeds of its own destruction. It has become a focus of major interest for politicians since it would appear to offer education at a similar standard to traditional education but at lower cost. The similarity of standard is achieved through the production of the package of attractively presented self-instructional material, the basis of which is almost invariably print. This "guarantees" the quality control. The lower cost is achieved through the replacement of the traditional teacher by this package, the high initial cost of which can be amortized over several years and several hundreds or even thousands of students. And herein lies the seed of destruction since the inexorable logic of the economist would suggest more and more reliance on the package, more and more reliance on volumes of students and less and less on the human intervention or on the wish of students for a large variety of courses.

In fact the production of a standard high class package of learning materials through a quasi-industrialised process in no way guarantees learning on the part of students. If we need a utensil with which to write, a pencil will serve the purpose. It can be mass produced at low cost but can be used to write a poem or a thesis, to draw an outline or to draw an intricate diagram. But there is no valid analogy between the teaching package and the pencil. The teaching package is not a simple tool of almost universal application. A better analogy with the teaching package is the art exhibition. Such an exhibition is the creation of one person or a group of people who wish to present an experience, often a learning experience, to an audience. Once created an exhibition is a fixed phenomenon, the cost of which may be amortized over time and the number of viewers. But each of the viewers will make an individual interpretation of the exhibition since the experience presented by those creating the exhibition will be regarded by the viewers within their own personal and preexisting frame of reference which may or may not be sympathetic or alien to the experience provided by the creators of the exhibition. A full understanding of the exhibition can only be obtained by discussing with others the experience which they have had or having a dialogue with those creating the exhibition. This is precisely the case with the teaching package. There is a need for interaction between students and or between students and teachers in order that the experience of the teaching package can be properly obtained.

Interaction is just as much a part of distance education as it is of any other form of education and that interaction has to entail a human factor since the package itself cannot admit of the infinite variation of advice and support that is demanded by the learners.

Thus distance education is an industrialised form of teaching and learning using many of the practices of mass production and cost savings associated with industrial processes. It remains, however, a service industry and not a manufacturing industry. The emphasis is not upon the product itself but rather on the customers who seek a product. British Airways offers a vast range of air travel routes throughout the world at particular times. To do so, like other air lines, it uses the processes and has the restrictions of manufacturing industry. Travel agents employ the processes of service industry. They recognise that some of their clients do not always want to travel the precise routes of British Airways in accordance with the rigid British Airways timetable. They therefore offer clients a choice of manufacturers, interpreting and suggesting a best fit. Such is the process of distance education.

The question of interaction and independence can be approached in several ways. But in distance education at all levels and both in the private and public sector there will be those who approach it solely from an economic stand point. To them the important feature might well be that interaction costs a lot of money and that independence costs very little. This is almost certainly true if we do not measure the system in educational terms. The measurement has to be made not only in terms of the quantity of successful students but also the quality of the educational process which they have undergone. I suggest that we should seriously consider at this stage abandoning the purely academic pursuit of defining distance education and seeing it as a new branch of education which somehow has to be dealt with through a new set of rules which have to be defined and defended in relation to traditional educational practices. We might put our efforts instead into research into the value of student support and interaction in order to demonstrate the value added to independent study for most, indeed perhaps all students and thus to maintain the method of education which participants of this conference represent, something to which I refer, merely for the sake of convenience, under the generic heading of distance education.

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TUTORIALS AS A CONTEXT FOR DEVELOPING INDEPENDENCE THROUGH INTERACTION

Tony Wright

INTRODUCTION

My own interest in interaction and independence is two-fold. Firstly, part of my job as a Staff Tutor in the UK's Open University involves helping tutorial staff to make the best use of the very limited time they have to meet with their students at tutorials. And it is in tutorials where issues of interaction and independence are most obviously manifested. Secondly, because I also tutor various OU courses from time to time, I have become increasingly aware of the need to pay attention to these issues in my own tutorials. This is not to imply that tutorials are the only area where they interaction and independece are important, but merely to indicate that this is where my particular interest lies, and that this is what I shall focus on.

The sense in which I shall use the term independence is to do with increasing the area over which one can exercise control of one's own destiny, compared to that which one is dependent on others. Independence is thus relative, rather than absolute, and this applies as much to the field of learning as to any other area of human activity. It is a particularly important concept in distance education because the obvious isolating effect of distance means that off-campus students necessarily have to be more independent and self-managing than on-campus ones. Thus any help and support they can be given in tutorials to enable them to develop as independent learners, and to exercise control over their own learning, ought to be worthwhile.

As Daniel and Marquis point out in their seminal paper(1) "... all learning involves interaction"; thus the notion of learning through interaction in tutorials is an obvious one. But where does the notion of independence come in? In this paper I shall show how they are related respectively as **process** and **product**. By this I mean that learning-independence can result from the process of interaction at tutorials. The word 'can' is crucial here because it all depends on what **kind** of interaction take place, which in turn depends on what the tutor is trying to do in his/her tutorials. So this raises the question of what tutorials are for, and here I have to put my own belief on the line.

TUTORIAL GOALS

I would pick out three goals as being of prime importance:-

1. To help students to pass the course
2. To help students acquire knowledge, skills and understanding from the course
3. To help students develop as independent learners

All students in my experience want to pass their course and I take it as my first priority to help them do this. This is the bottom line for them and for me. Other goals are subsidiary to this.

With very few exceptions, students not only want to pass their course but are motivated by an interest in the subject area itself and want to acquire whatever knowledge, skills and other benefits the course has to offer. They hope thus to be empowered through studying it so that their 'potential for action' is increased(2). Again, I share this goal totally.

Unlike the other two goals, developing learning independence is not something which students explicitly subscribe to when asked to state their reasons for studying a course. However, as a professional teacher I believe it is part of my job to help them become more competent and more confident as learners and thus to become, as far as possible, self-managing and independent of me for their learning requirements.

It should be obvious that the goals I've set out above apply as much to correspondence tuition as to face-to-face tuition, but I'm only concerned here with the latter. So the KEY question which has to be asked is:-

How can face-to-face tuition help or hinder the attainment of these goals?

I believe it is important for tutors to ask this question, and to find their own answers to it in order to develop their strategies and tactics for running tutorials. I have given my own answers to this question elsewhere(3). Suffice to say that I share the belief with many of my colleagues throughout the OU that a group-based approach provides the most effective way of meeting the kind of goals I have stated above. Such an approach takes advantage of the rich variety of interactions which are possible in group discussions.

But group discussion should consist of more than just sitting around a table and talking about whatever subject someone happens to raise. This only results in 'face-to-face aimlessness'.(1)

Using ideas pioneered by Northedge and Gibbs (4), experience has shown that an effective way of running, using a group-based tutorial approach is to manage them so that learning takes place in well-defined stages. Structuring a tutorial in this way provides a way of allowing different kinds of interaction to take place. Paradoxically, by controlling the interaction in this way, the tutor creates the freedom for development of independence. Let me explain with an example.

STRUCTURE AND INTERACTION

Suppose that a tutorial group is presented with a question related to a topic of interest from their course. Their task might be to work out the correct answer to the question, or to make notes on ideas they have about the question ... or whatever. The task could be structured into (say) three stages:-

STAGE 1: students attempt the task individually

STAGE 2: students pair up and compare answers/notes

STAGE 3: all the students come together, pool their answers/notes and negotiate any differences

So what is the value of structuring the activity in this way for developing independence?

Each successive stage involves a progressively larger 'learning space' for the student (individual, pair and plenary in the example given above), each involving a different kind of interaction. Stage 1 provides an opportunity for everyone to work on their own (conversation with oneself). This helps students to find out what they know and don't know, sometimes with surprising results. In the former case this can lead to increased confidence; in the latter it helps reveal blockages to learning which can be dealt with during discussions in subsequent stages. In either case it increases self-awareness, which is an important key to learning and change.

Stages 2 and 3 provide an opportunity to converse with others, as an important means to learning. Among the many benefits gained from discussion are the development of communication skills such as listening to others and presenting one's own point of view. Many students gain in confidence through this process, while benefiting from hearing views and ideas which may be different from their own. It would, of course, be perfectly feasible to go straight from Stage 1 to Stage 3, but the value of Stage 2 is that it allows everyone to go more gradually from private conversation to full public conversation via the relative privacy of a one-to-one conversation. Most people, especially those who are shy, find it easier to talk to one person than to a whole group, so this stage is particularly important in early group meetings for developing confidence.

A WIDER VIEW OF THE INTERACTIONS

From the point of view of managing the interactions it is necessary to view the stages together, as well as separately, and to see them as parts of a wider process. For instance, what happens after the final stage has finished? It might be tempting to start again with a new activity. But this form of group learning is hard for tutors and students alike (it is surprising how much emotional energy is involved), so it is best to follow with a short period for everyone to relax. Apart from everything else this gives the opportunity for informal conversations, which can often result in unforseen problems being aired and which can sometimes (if the tutor is responsive) send the tutorial off in an unexpected direction - all part of the fun! So relaxation can be seen as a separate, and important, stage in the learning cycle (see Fig 1). But there is yet another stage which is often necessary before beginning the cycle again. This is best described as 'energisation'. This is basically a way of introducing a topic for discussion; it could be an explication of a topic which is known to be difficult, or it could take the form of some didactive teaching in response to a request for some remedial help. Apart from anything else, this stage provides some variety to the tutorial.

On the face of it, what I have described might seem like a mechanical (and boring!) process, but Fig 1 is only a very simple model which doesn't capture the variety of number, length and type of stages which can be used. For instance a particular activity can be broken down into separate tasks which are then fed into successive stages, each task building on the preceding one. Nor does it indicate the immense variety of activities which can be used successfully with this method (3).

The value of structured group learning in helping students to become more independent arises from the fact that:

i) it recognises that everyone in a group usually has something worthwhile to contribute and provides the opportunity for them to do so in a cooperative, non-threatening atmosphere, rather than in a competitive one where the confident dominate at the expense of the others. It is therefore a great confidence builder - a necessary attribute of the independent learner.(5)

ii) it develops a culture of mutual help because of its social emphasis. As the group culture develops, students appreciate the benefits of learning from each other rather than from me, and also enjoy helping each other to learn. So an intitial Parent (tutor) - Child (student) dependency relationship changes to an Adult - Adult one. It becomes an easy step from there to form a self-help group, which can work completely independently from me. In this sense the group, as a whole, matures into adulthood.

iii) it can be a very effective way of developing students' learning competence. For example, study skills such as note-taking, summarising, drawing diagrams, learning from TV etc, can be taught using suitably designed activities, using topics from the course as 'working material', thus killing two birds with one stone.

INDEPENDENCE AND PERSONAL DEVELOPMENT

As I have indicated elsewhere (2) acquiring the skills and confidence necessary for independent learning is only part of the personal development which results from studying a course. The other part is the acquisition of knowledge, understanding and so on, from the academic content. Structured group learning can foster both these aspects simultaneously as I have indicated above, and so enables all three goals to be realised. But it would be misleading to see structured group learning as a panacea for successful tutorials. The rough and tumble or reality is different! Nevertheless, it is a holistic system of teaching and learning which is consistent with the holistic concept of personal development (Fig 2).

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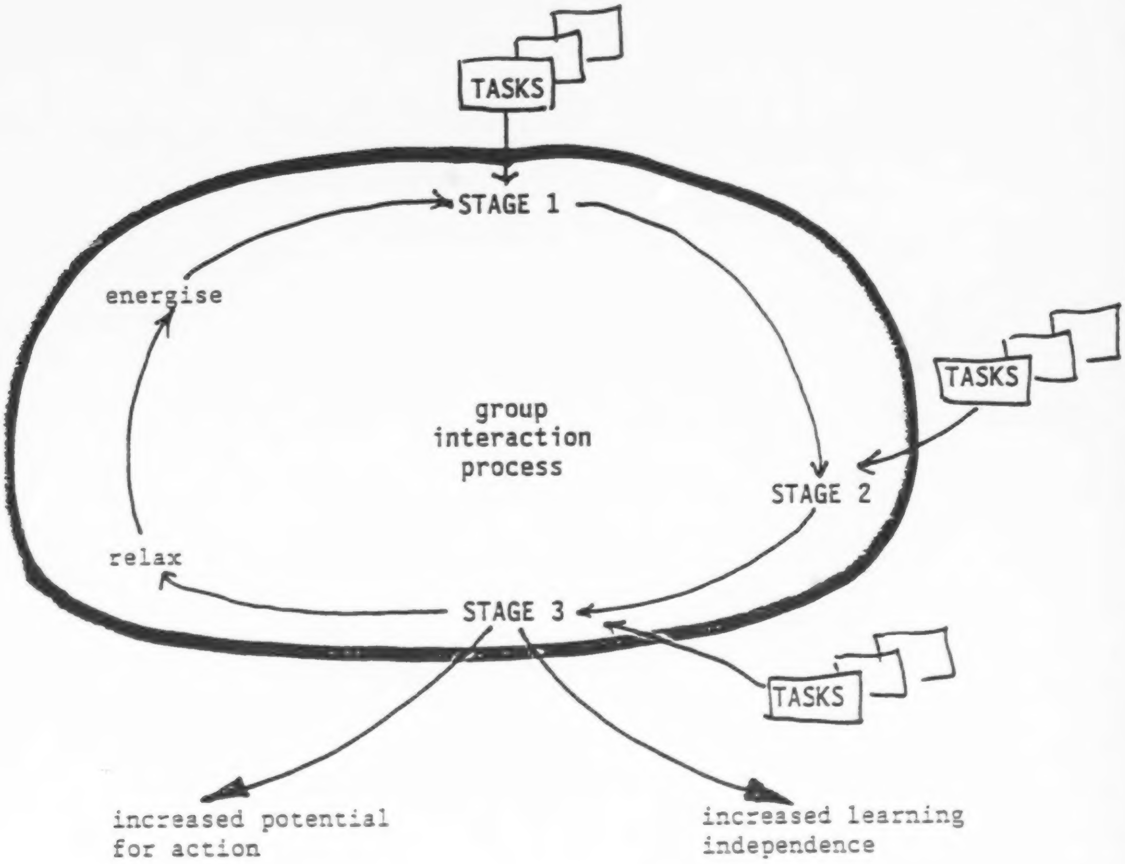
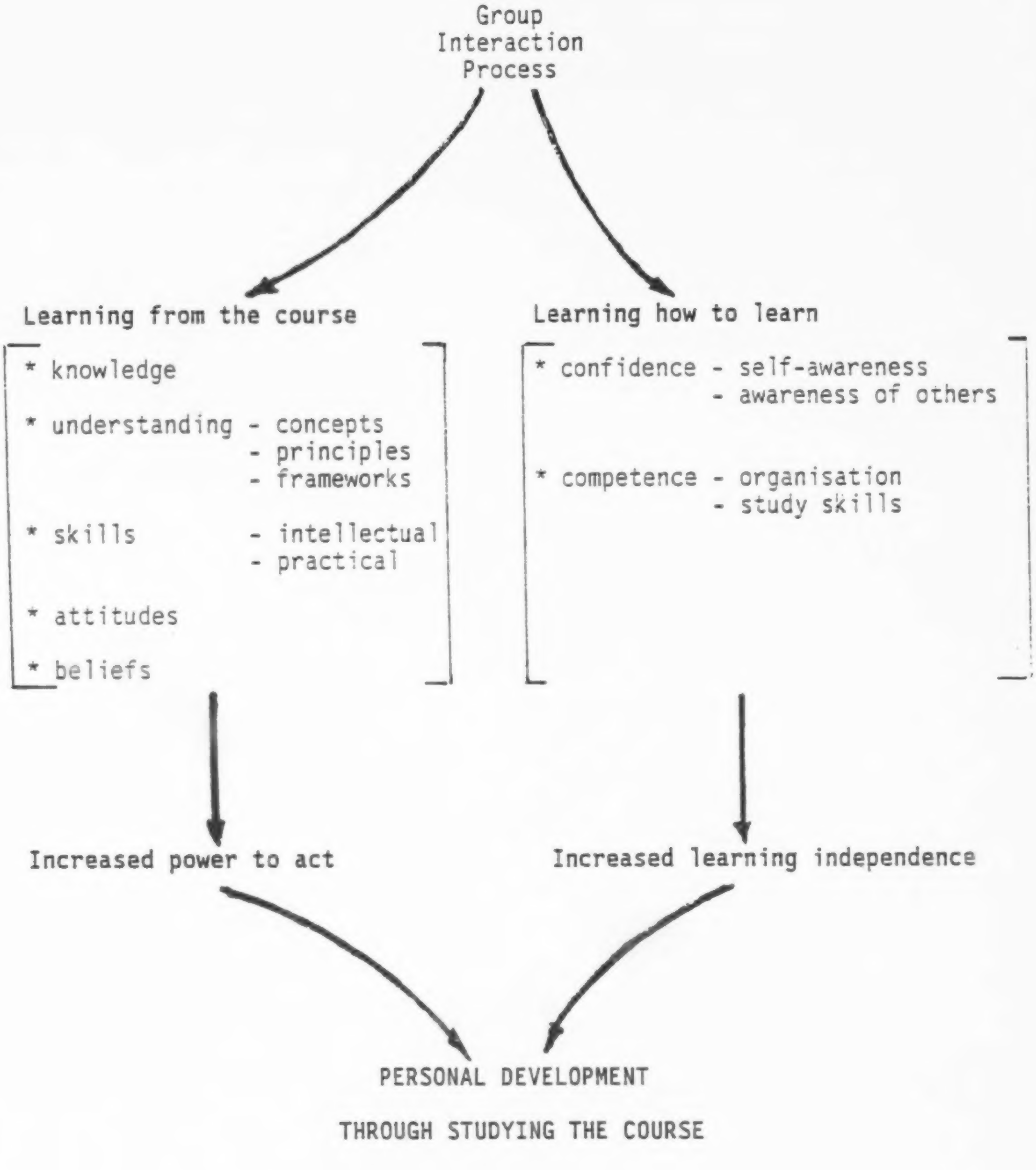

TASKS
STAGE 1
energise
group interaction process
TASKS
STAGE 2
relax
STAGE 3
TASKS
increased potential for action
increased learning independence

Fig 1 The Learning Cycle

BENEFITS OF STRUCTURED GROUP LEARNING FOR THE INDIVIDUAL STUDENT


Group Interaction Process
Learning from the course
* knowledge
* understanding - concepts
- principles
- frameworks
* skills - intellectual
- practical
* attitudes
* beliefs
Learning how to learn
* confidence - self-awareness
- awareness of others
* competence - organisation
- study skills
Increased power to act
Increased learning independence
PERSONAL DEVELOPMENT
THROUGH STUDYING THE COURSE

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